

2009

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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**THE IMPACTS OF THE GLOBAL CRISIS
2008-2009 ON SHIPPING MARKETS**

A Review of key factors guiding investment decisions in ships

By

BHIRUGNATH MEENAKSI

Mauritius

A dissertation submitted to the World Maritime University in partial
Fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

MARITIME AFFAIRS

(SHIPPING MANAGEMENT)

2009

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DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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ACKNOWLEDGEMENT

I wish to first thank the good lord for making it possible for me to do my postgraduate study at the World Maritime University (WMU). I am grateful to the Ministry of Public Infrastructure, Land Transport and Shipping (Mauritius) for my nomination and Mrs Susan Jackson of WMU for being instrumental in obtaining the fellowship from the International Chamber of Shipping (ICS). My sincere thanks to all staff of the Ministry especially Capt. P. Seebaluck and Mr P. Bhowon, and Mr. Tony Mason secretary General of ICS/ISF for their continuous support, professional guidance and giving me the confidence to complete this dissertation.

It is funny how I suddenly recalled the first semester when we had the very first conversation on dissertation writing at WMU. Being from the Maritime Administration and JP with his law studies; we were convinced that we will not be going for dissertation since we neither had the basic commercial knowledge nor the required experience. Instead, we were both convinced of doing electives in the fourth semester to learn as much we can on commercial side of shipping. Yet, today, I cannot express the great feeling of accomplishment that emerged after I had written my last line of conclusion and surprised, myself thinking that I finally had done it. Am sure so does JP!

Without doubt, this dissertation is the outcome of the wealth of knowledge we gained from our WMU faculty professors as well as visiting professors in building up our foundation in commercial shipping, which was subsequently consolidated by our respective supervisors.

As a mentor, Professor Patrick Donner has been the best supervisor I could have wished for. His unlimited patience, his broad understanding and experience in the shipping industry and above all, his highly positive attitude in handling my quite undisciplined and messy style of working my way through the dissertation in good faith has been flawless.

I also wish to thank Professor Pierre Cariou for sharing the floor with the Shipping Management specialisation during the first WMU Student Forum 2009. The discussion which followed held my interest in pursuing the subject in spite of all the odds. Special thanks to Professor Nakasawa for his guidance in drafting the questionnaire used to collect data and soliciting the expertise of Mr. Erik Ponnert on my behalf; who facilitated the survey exercise using the online web service administered by WMU. I am equally grateful to Assistant Professor Clive Cole for his helpful suggestions in enhancing the final document linguistically.

I am particularly indebted to former WMU graduates and WMU visiting professors for filling the questionnaire that was circulated. Based on the favourable response rate which ensued, I have no doubts of the truth embedded in the WMU song which says ``Co-operation we achieve much more precious than gold``.

Special thanks to Mrs Lyndell Lundahl and Mr and Mrs Brown for being so understanding with regards to the Malmö Update, and Aditya and Swe Swe for covering up for me whenever it was possible :)! Special regards to Susannah and all WMU staff for easing our student life throughout our stay. Thank you Cecilia for always keeping me updated on the latest publications available on the global crisis and your motherly concern during the long week days I used to spend at the WMU Library.

I am also grateful to all the members of the WMUSC 2009 and ASA for the team spirit we cherished during our mandate as executive members and especially for their invaluable support and patience during the last month when I was “hibernating” with the excuse of writing my dissertation.

My heartiest thanks to Capt. Michael Manuel, Capt. Sarabjit Singh Butalia and Mrs Christine Moulder for always being there. I also owe thanks to all my SM classmates and WMU friends, which includes Aba, Adil, Ahmed, Andreas, Anete, Anh, Anna, Bello, Di, Elissa, Fajar, Fred, Jan, Jean-Pie, Jian, Ha, Hasan, Hiacinter, Kelela, Kjaw, Linh, Lung’anzi, M’hamed, Mitzie, Mr Paul, Nelli, Ondy, Poppy, Rahman, Reto, Richard, Saha, Saman, Thida, Toufik, Tran, Vicky, Yasu, Xudong and last but not the least Lu, for bearing with my endless whining about dissertation writing and always giving me a reason to smile.

Finally my profound gratitude to my parents for their love and blessings, my siblings; Priscilla, Vanshinee and Naveesha for inspiring me with their continuous encouragement, Arvind for his unfaltering brotherly concern, Kamal and his lovely family, my relatives and my two special friends Ashweena and Vinesh who were always a call away whenever I used to feel homesick and cheering me up!

“Recovery is sound only if it (comes) of itself. For any revival which is merely due to artificial stimulus leaves part of the work of depressions undone and adds, to an undigested remnant of maladjustment, new maladjustment of its own which has to be liquidated in turn, thus threatening business with another(worse)crisis ahead.”

(Joseph Schumpeter)

Title of Dissertation: *The impacts of the Global Crisis 2008-2009 on shipping markets
- A review of key factors guiding investment decisions in ships*

Degree: *MSc*

Since after every climb, the downward path generally follows, undoubtedly, the economic downturn of 2008-09 was being anticipated as much by forecasting wizards as by rational men. Yet, the world economy was taken aback when the crisis happened as was the maritime community by the shipping crisis which followed. Why is this so?

The initial shocks of the financial crisis on the shipping industry were deemed ‘natural’. However, neither the individual shipping market segments nor all the firms making up those specific market segments were affected identically. Since shipping cycles are inherent to industry, should not the market be simply allowed to readjust itself? Why did government intervention become so critical?

In this context, investment in ships is and will remain a critical issue for the industry on all fronts, particularly the shipbuilding market. Such a crisis may happen once in a while, since it has a cyclical nature, but its effects on companies is relatively short compared to the long term effects it may have on the lives of people throughout the world. Thus, these seemingly simple investment decisions taken at corporate levels have the power to trigger far reaching consequences that easily transcend national barriers, as witnessed by the global crisis of 2008-09.

On the whole, by using a mixed methodology, the dissertation, attempts to examine the relationships between shipping cycles and the reaction of the shipping industry to crises. By analysing the effects of the current crisis on individual shipping markets and shipping market segments the merits of government intervention under special circumstances is emphasised. The value of effective information flow and continuous review and improvement of risk management strategies in cushioning the world economy against similar shocks in future is also acknowledged.

Key Words: *Global crisis 2008-09, Shipping cycles, Investment in ships, Government intervention, Risk management*

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LIST OF ABBREVIATIONS

'000 dwt	Thousand deadweight tons
BDI	Baltic Dry Index
FFAs	Forward Freight Agreements
H_0	The null hypothesis
H_1	The alternative hypothesis
NBL	Newbuilding ship
r	Correlation coefficient
SH	Secondhand ship
TC rates	Time charter rates
teu	Twenty foot equivalent units
VLCC	Very Large Crude oil Carriers
WMU	World Maritime University

Chapter 1 - Introduction

1.1 Shipping Crisis: Down the beaten path

“If you do not like recessions, you should not be in shipping!”, (Stopford, 2001, p.2). In other words, crises are normal occurrences in shipping. Indeed, the history of maritime transport is marked by a number of similar occurrences with the great depression of the 1930’s and the depression of the 1980’s being the most devastating ones until recently.

In fact, today the difference from former ones is being seriously dwelled on as the maritime industry goes through its present global downturn, which is being critically viewed by many as a “gratuitous and unnecessary tragedy”, like the depression of the 1930’s (Krugman, 2008, p.3), and one of the greatest puzzles of this new era.

1.2 Background

1.2.1. Shipping markets

Earnestly engaged in providing transport services to facilitate international trade, the shipping industry is a highly specialised sector of the world’s economy. It is made up of four sub-markets, namely the new building market, the sale and purchase market, the freight market and the demolition market. As may be inferred by the appellation of the markets, the new building market trades new ships and the sale and purchase market deals in second hand ships. The freight market is concerned with finding employment for ships in service while the demolition market services are sought

upon the expiry of the vessels' useful economic life, which generally spans a period of at least twenty years.

1.2.2. Shipping market segments

Within the four shipping markets, there is further sub-division into specific market segments based on technical requirements for goods and services trade. The specialised market segments include general cargo ships, dry bulk carriers, reefers, tankers and containerships.

Built for carriage of a particular type of cargo, the market segments of particular ships are affected by the changes in that specific commodity market accordingly. In this study, the focus will be on the containership, dry bulk and tanker market segment.

1.2.3. Uniqueness of the industry

Investment in ships is riskier than in other assets. This is mainly the consequence of the highly capital intensive nature of the industry, coupled with its inherent cyclicity (Cushing, 1997, p.2; Ma, 2008, p.5).

Also, in the shipping industry, contrary to the classic theory based on Say's law, supply does not create its own demand. It is the prospect of high earnings potential at a given time which encourages ship owners to invest in building ships. However, the time taken between the order being placed and the actual delivery date in the long run offers no guarantee to the owners for recovering their investment.

Moreover, being operational on the high seas and international waters in facilitating trade, another unique characteristic of the shipping industry is its openness and the possibility of free entry and free exit. As such, though the industry may be a significant pillar of the economy for many maritime nations, government intervention in commercial shipping policies has more often been limited.

1.3 Economics of sea transport

1.3.1. Demand and supply for shipping services

Unlike, normal consumer goods and services, the low cost of sea transport does not automatically imply greater use of sea transport services. Its price elasticity is therefore relatively low. In other words, demand for shipping services is not for itself. Instead, driven by the economic needs of nations separated by oceans, demand for shipping services is derived from international trade (Chrzanowski, 1985, p.52: Ma, 2008, p.4). Shipping is, therefore, not only affected by the dynamics within the industry but also by changes in the broader macro-economy.

On the other hand, the supply of shipping services is determined by the size and structure of the fleet in service, the average time of operations and productivity of shipping while the supply of fleet itself, is affected by how confident ship owners feel about ordering new tonnage, guided by the freight market and availability of finance (Chrzanowski, 1985, p.54).

In theory, the shipping industry is known to operate under conditions of competitive markets which entail the interaction of large numbers of buyers and sellers in the trade of a homogenous product, which is sea transport services, and allowing the free entry and free exit of investors given that information flow is assumed to be fluid.

When the industry operates at a level where the earnings exceed the operational costs, it attracts new investors. As the share of the industry's aggregate profit gets constantly eroded with the entry of subsequent new entrants over time, in parallel a point is reached as gradually the supply of services exceeds the aggregate demand so that the price of the service offered is lowered to a level where operating costs are barely met. At this point, speculative investors leave the market. Slowly, the industry recovers from the depressed market conditions and restores its equilibrium position whereby earnings from operating activities cover its operating costs. In the long run, demand builds up as the global economy flourishes, existing operators again benefit

from abnormal profits which is shortly followed by the influx of speculative investors as the merry-go-round continues. In theory, this is basically how the dynamics of the free market is believed to regulate itself over time.

However, theoretical frameworks in economics are based on assumptions that all other factors remain constant as the change and resulting implication in one element is observed as commonly provided for by use of the Latin phrase "*ceteris paribus*", (term used to denote the assumption that "all else remaining constant"). Similarly, in shipping economics, the lives of investors in ships are not as easy as may be thought based on the theory of competitive markets.

1.3.2. Shipping cycles and shipping risks

"Just as the weather dominates the lives of seafarers, so the waves of the shipping cycle ripple through the financial lives of ship owners" (Stopford, 1997, p.38). In parallel, Kavussanos (2002, p.661), in his paper entitled "Business risk measurement and management in the cargo carrying sector of the shipping industry", provides a very concise listing of the commercial decisions that ship owners normally have to face, ranging from the most favourable timing to entering the industry, the most suitable means of financing investment in ships at that point of time to the kind of contracts they should secure for employment of the vessels. This clearly illustrates the extent to which variable economic conditions influence investment decisions in the industry and how far risks are all pervasive as operators struggle to survive under the prevailing conditions of uncertainty.

In the shipping business, what is termed as "shipping risk" essentially revolves around the huge capital investment that is involved. If vessels are limited, the ship owners make a fortune but when there is excess tonnage in the market, investors have to bear the high opportunity costs of vessels being idle. Therefore, as observed by Kavussanos (2002, p.688), shipping risks mainly emanate from fluctuations in freight rates and bunker prices which subsequently affect the price of the investment,

which is obviously the main concern of ship owners and potential investors. In shipping investment theory, it is this interplay of free market conditions and shipping risks which creates the famous shipping cycles. In fact, for ship owners who contribute to the industry as cargo carriers, shipping cycles implies the need for contingency plans while for those owners who invest in ships as if it is a commodity and are, therefore, driven by high gains from asset play, view shipping cycles as vital ``cyclical swings of fortune `` (Drewry, 2004, p.6; Drewry 1999, p.5).

Figure 1 is a vivid portrayal of the earlier analogy of Stopford whereby he associates shipping cycles with sea waves and the dynamic market environment shipping practitioners are engaged in.

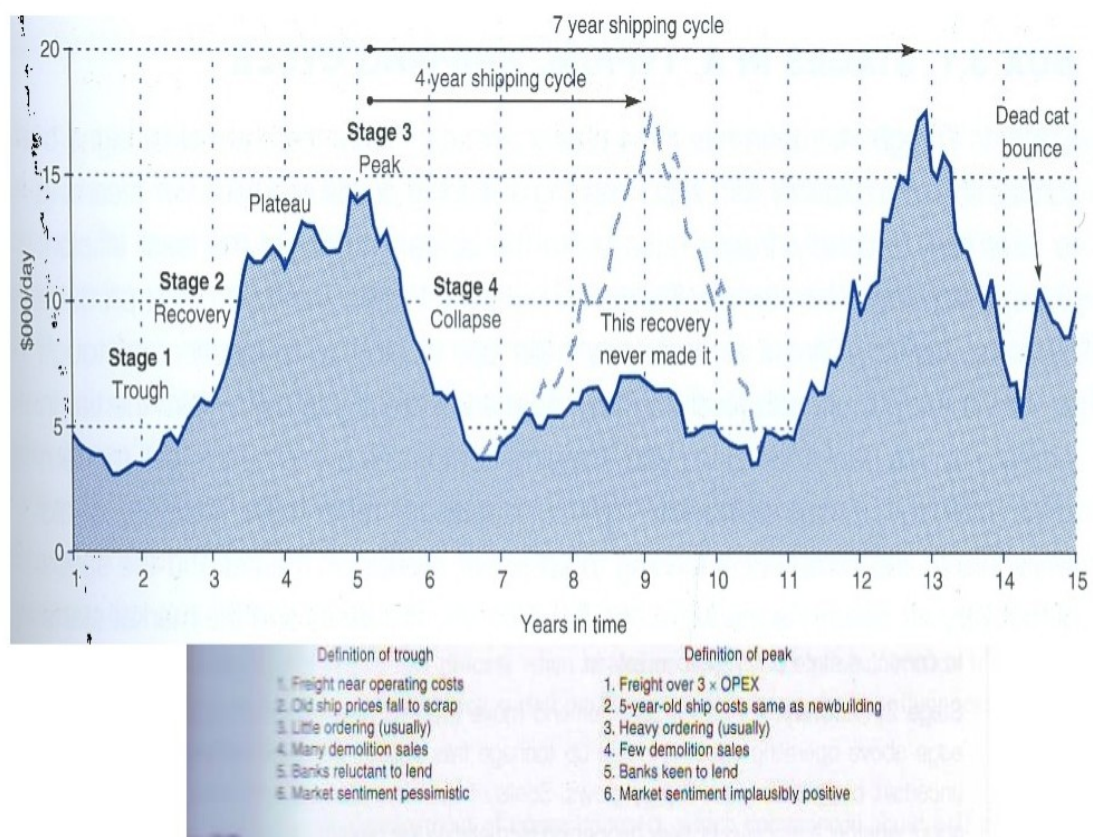


Figure 1: Stages in a typical shipping market cycle

Source: Stopford, M. (2008, p.97). *Maritime Economics*. Routledge.

Unlike other goods and services traded, there is a significant time difference between the demand placed for new ships and their actual delivery. Consequently, prompted by this lag, the varying fluctuations which characterise the shipping cycles are simply reactions of the market as cash flow is constantly adjusted to remove imbalances in demand and supply for ships over the span of time (Stopford, 1997, pp.40-42). As may be deduced, therefore, it is fundamentally cash flow which eventually paves the way for the famous shipping market cycles.

1.3.2. Shipping finance

Figure 2 clearly shows the importance of finance in binding the four shipping markets.

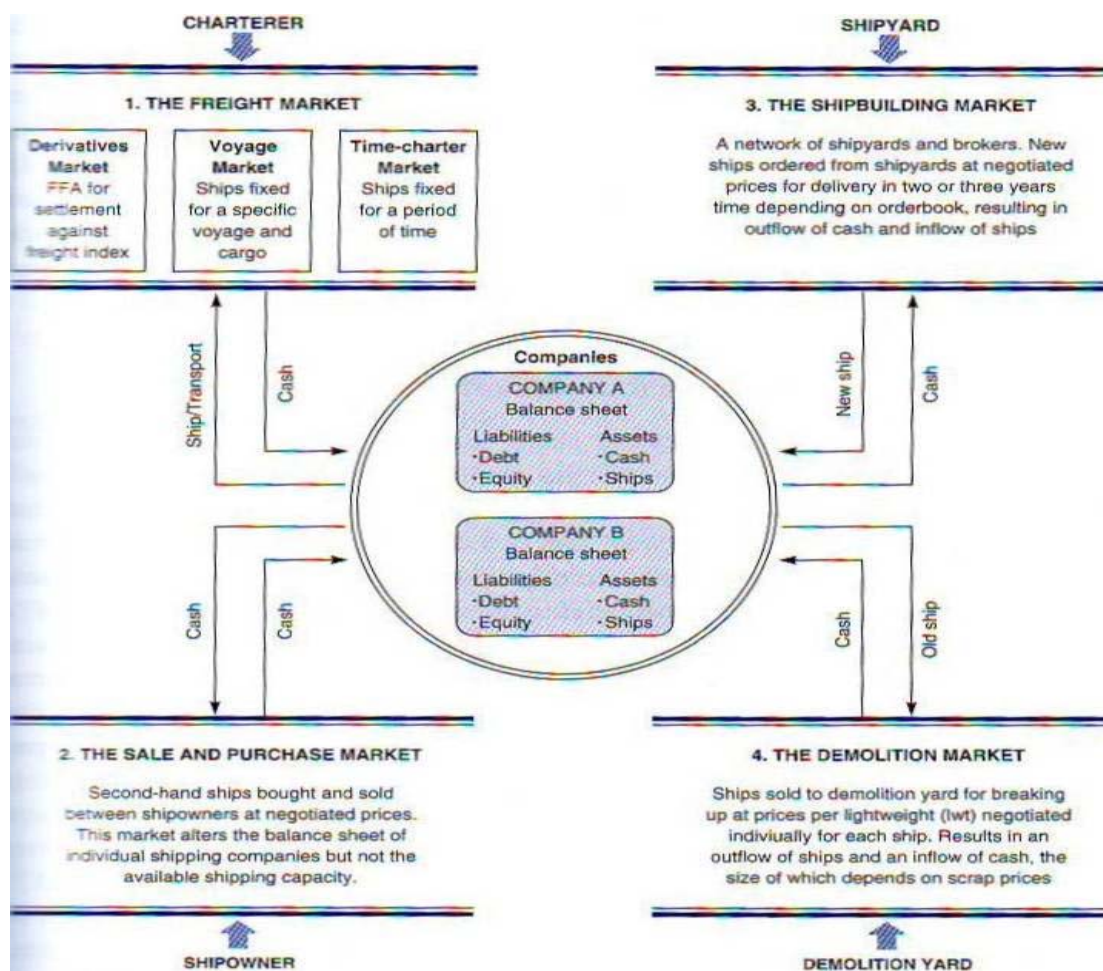


Figure 2: The critical linkage between the four shipping markets and finance

Source: Stopford, M. (2008, p.179). *Maritime Economics*. Routledge.

As so wisely and concisely pointed out by Stopford (2002, p.204), while the shipping cycles reflect the heart beat of the industry, from figure 2, it is evident that cash flow or finance is the ``life-blood`` link that connects and feeds the clusters that make up the shipping industry.

This analogy could not be more suited to describe any previous crises as it does for the current global recession whereby it is being claimed by most that the downturn in shipping related investments was forced on the industry by virtue of the turmoil in the financial markets which preceded it.

In reality, irrespective of the methods of financing used in shipping, be it through equity financing, loan financing or leasing, the present global downturn has shown how the vulnerability of financial markets can cause unforeseen turbulence in the shipping industry. Clearly, therefore, as applicable to any commercially oriented enterprise, finance is and remains the main driving force behind the shipping industry's *raison d'être* as well as its continued existence and growth.

1.3.3. The shipping and financial crisis linkage

By virtue of competitive markets, whereby market cycles are common occurrences, shipping crises are regular features of the shipping industry. However, unlike in other markets, as clearly explained by Thanopoulou (2002, pp. 623-641), the fluctuations in asset prices in any market is not comparable to the value of ships which can reach levels no more than a meagre fraction of its acquisition price during recessionary periods. This state of affairs raises the concerns not only of investors in ships but also financing institutions who provide the funds for the investment. For instance, in cases whereby ships are mortgaged as collateral security for the loan, the sudden significant fall in their value implies that the ships are no longer an equivalent measure of security. Additional collateral security is usually required to commensurate the value of the debt finance as agreed through the covenants included in the loan agreement.

As established earlier on, the changing value of investments in ships is driven mainly by fluctuations in freight rate. In an attempt to reduce such risk exposures, risk management became a must for the shipping industry in the early 1980's. In line with this philosophy, risk management techniques, such as hedging using futures, forwards and options, which had been successfully applied in the commodity and financial markets earlier, were introduced in the shipping business (Nomikos & Alizadeh, 2002, p.693).

1.3.4. Emerging issues

Since the industry is familiar with shipping cycles after a history of 5, 000 years, it is expected that it should be reasonable by now to assume that investment in shipping may be conducted in such a way that potentially significant losses are minimised in the future. In fact, for this purpose the research departments of the reputed ship broking houses have become major players in compiling shipping statistics for the industry. These published statistics are continuously updated to reflect the prevailing market conditions daily and to assist shipping investors in appraising their investment activities. Surprisingly, still, the shipping industry has been once again unsuccessful in containing the damage caused by the current crisis. Consequently, government intervention, which is usually snubbed in the industry, became a must and the efficiency of existing and sophisticated risk management tools was challenged.

1.4 Objectives of the research

The objectives of this research are to:

- a. analyse the relationship between the shipping and financial crisis;
- b. study the impact of the current crisis on shipping markets;
- c. understand the difference in response of the different market segments as a guide for future investment in shipping;
- d. analyse the usefulness of shipping statistics in guiding investment decisions;

- e. appreciate how far government intervention is truly needed or is desirable in shipping, and
- f. determine how far risk management is possible in commercial shipping investment activities

1.5 Structure

The dissertation introduces the key concepts and issues on the subject matter.

Chapter 2 consists of a critical review of the relevant literature.

Chapter 3 explains the methods used to achieve the objectives of the study.

Chapter 4 summarises the findings of the applied methodology to validate theoretical arguments being established using qualitative and quantitative research tools.

Chapter 5 concludes the discussion.

Chapter 2 – Does history repeat itself in shipping?

“ Adversity reveals genius, prosperity conceals it” (Horace)

2.1 Global crisis 2008/9

Undoubtedly, the global recession of 2008-09 is a feast for shipping analysts. This current global downturn offers not only new challenges to shipping practitioners in surviving this ordeal, but also new insights and key issues to be urgently addressed by the industry.

As indicated in the previous chapter, a number of questions have been raised and are being deliberated. The shipping industry is now in a recession, so what? Is the current shipping crisis any different from previous crises? Is it really a disaster for the industry or is it more of a “blessing in disguise”? Why did the dry bulk market crash so suddenly? Why did the other market segments not do so? How useful were shipping statistics as a decision-support to investors? Why did the Group of 20, commonly referred to as the G20 (established in 1999), an international forum made up of finance ministers and central bank governors, join forces again to deliberate on the current crisis in June 2009? Shipping cycles are a common phenomenon in this industry, so should the market not be allowed to regulate itself? Were there not reasonable risk management strategies in place to protect the industry against such adversity?

In order to respond to these questions in an objective manner, a review of the literature is important.

2.2 The current global crisis and former crises

In its documented commercial history, which spans over a period of 5,000 years, the shipping industry is reported to have been through 22 shipping cycles (Stopford, 2007, p.2). Interestingly, the predicament of the containerships and dry bulk segments today seems to be a repetition of the 1970's whereby optimism in orders placed resulted in tankers being moved from builder's yard straight into lay up (Chrzanowski, 1985, p.4).

It is reported that in 2001, shipbuilding capacity, which had been cut back in the 1980's, grew so rapidly that those ship owners who were used to selling 10-year old vessels for as much as the ships' original new building cost had to face a 60% fall in their assets' real worth (Stopford, 2003, p. 3). Similarly, at the end of June 2009, a 5-year old Capesize vessel was worth 30% of the value it was worth in 2008.

Based on Stopford's critical review of the last crisis, what is going on today, eight years later, seems a replay of what happened after the boom of 2000. In fact, today once again the same question is being asked. 'How deep and how long' (Stopford, 2001, p.4) is the global downturn going to last?

Oddly, in spite of the many parallels with the former crises, Alan Greenspan, former Chairman of the U.S. Federal Reserve, still referred to the downturn as a 'once-in-a-century-credit tsunami' (Allen, 2008). Even Erskine Harkey's presentation at the Covenant Men's Club in April 2009 acknowledged the current downturn as 'the once-in-a-lifetime recession'. It was Harkey's explanation of the merit of diversification as a risk management strategy vis-à-vis former crises which justified his perception of the current crisis. Actually, when the financial tsunami hit the world in 2008, it was a fact that even diversification based on the popular portfolio theory (Cariou, 2009, p.33), which is essentially about spreading risk by investing in assets with differing risk and return combination, was ineffective in cushioning the shock.

2.3 Bane or boon?

Broadly, there seemed to be general consensus in the industry to the saying by Mr. K. Matsushita, founder of the Panasonic Group, `` Boom is welcome. Recession is more welcome`` (Jacques, 2008, p.2; Lampert, 2008, p.3; Karatzas, 2008, p.39; Luthwaithe, 2008, p.10; Rogers, 2009; Svenning, 2008; Woodbridge, 2008, p.3). This philosophy is based upon the belief that ``shipping cycles have a Darwinian purpose`` (Stopford, 2009, p.99). It is held that the recessionary phases of recessions create an environment which forces weak operators out of business and leaves behind a more efficient and vibrant industry to prosper.

Nevertheless, in spite of the evidently positive approach of the key players in the industry, one cannot disregard the direct and immediate consequences of recessions and in particular the current global recession. According to the latest update provided by Salomon, R. (2009, January), the number of so-called ``notable`` bankruptcies amounted to 108 companies by the end of 2008 while the filings cases increased by 42% from June 2007 to June 2008. These figures are a clear indicator of the level of unemployment that is being generated as the world economic recession drags on. Obviously these bankruptcies have no direct impact on the shipping industry but they certainly have a lagging impact. Loss of employment implies loss of income. Lower aggregate income levels implies a lower level of spending which indirectly implies a lower demand for shipping services that will most likely prolong the ongoing shipping crisis.

Suppose the focus is kept on the shipping industry. The impact of the crisis and its implications on shipyards is clearly demonstrated in the case of China and South Korea.

2.4 Shipping markets & selected shipping market segments

In his study of the independence of shipping markets, Prof. Volk, B. (2002) shows how a sound understanding of the underlying relationship between freight rates, new

buildings and second hand vessel prices influences the timing as well as the level of investment in specific market segments. He concludes by stating that mistakes made in shipping investment are therefore, in his opinion, the consequence of an insufficient understanding of the freight rate fluctuations under conditions of competitive markets. Stopford (2001, p.6), also relates the rise and fall of freight rates. His analysis of the performance of individual market segments is explained in terms of whether cycles are demand driven or supply dampened cycles against the backdrop of broader macroeconomic market conditions. The volatility in oil prices over time influences investment in tankers, the dry bulk trade relies on iron ore and coal trade prospects, while the containership market is dependent on the purchasing power of the consumers of manufactured goods.

Though the shipping industry in general is considered to operate under conditions of perfectly competitive markets, the market structure under which the individual shipping market segments operate differs considerably. The dry bulk sector retains the characteristics of the perfectly competitive market as there are no barriers to entry. The shipping services by bulkers are homogenous. The existence of the Baltic Exchange Dry Index as a barometer of the prevailing market freight rate ensures that free market conditions are met as no single buyer or seller can influence the freight dictated by the market.

On the other hand, investment in the tanker trade requires compliance to a number of safety regulations and the implied liability implications in case of pollution are far more significant. Moreover, the nature of the commodity traded encourages long term contracts. Although there are a number of independent tanker owners in the industry, the common practice is to charter their vessels to reputed oil companies on long term contracts. These special requirements limit the number of market operators, which is similar to the conditions of the monopoly (only one supplier) market structure; as well as to the conditions of the perfectly competitive market where the services provided by tankers are deemed homogenous (ICS, 2002, p.111)

as the World Scale Index ensures that oil companies do not practice price discrimination, thus giving the appearance that the tanker market is operating under conditions of monopolistic competition.

Lastly, it is held that the container trade operates under conditions of oligopolistic competition (Chrzanowski, 1985, pp.56-60; Kavussanos, 2002, p.665). Under the oligopolistic market structure, there is increased emphasis on product/service differentiation. In the container trade, the schedule and frequency of service is fixed and regular. Incidentally, speed, reliability and quality of service become critical elements of product/service differentiation. Although the service being provided is basically the same, the brand name and the efficiency of the company becomes a more critical factor in influencing shippers' choice of the services offered. Moreover, unlike the other two market segments, freight rates in the container trade are not synchronised through international measures like the Baltic Dry Index or the World Scale Index; the prices being fixed at the discretion of the liner companies. Surprisingly, the rates are usually very similar. If one supplier reduces its freight rate to capture a greater share of the market, others will follow suit so that in the long run, it is in the interest of all parties to co-operate tacitly, as is observed in practice.

2.5 Shipping finance and statistics

Indeed ``shipping benefits from globalization more than almost any other sector``, and is therefore more prone to be even more vulnerable to a global economic crisis, (Schulz, 2008). However, in attempting to explain inter-alia, ``why some financial crisis appear to be contagious`` , Rand's monograph report (Lowell et al., 1998), provides four contagion models, namely economic linkages, heightened awareness, portfolio adjustment and herd behaviour.

The mentioned models show ``the different implications for the predictability and preventability of multi-country crises ...unfortunately, neither the causes of multi-country financial crises nor the mechanisms by which they are transmitted across

borders are well understood. `` It was also reported that traditional warning signals including unsettling macroeconomic and political developments were found to be of little use in cushioning the industry from the aftershocks of such events. Similarly, initially the linkage between the financial market crash and subsequent freight market collapse seems unclear. Yet, in the Drewry (1998, p.1) publication it is plainly stated that ``shipping finance is more cyclical than the shipping industry itself`` while, Lloyd-Lewis et al (2008, pp.63-65) clearly explained how globalisation and growth of the global credit markets had influenced the speed of growth of the shipping industry and its subsequent doom during the current crisis

As far as shipping statistics is concerned, their predictive value is declared to be limited. In fact, as Dr. Martin Stopford, the Managing Director of Clarkson Research (one of the leading providers of integrated shipping services) says, `` lately forecasters had not had much luck predicting the length and timing of shipping cycles`` (Stopford, 2004, p. 3). How far, then, can shipping statistics be expected to be reliable measures in developing suitable risk management strategies in the future? Similarly, some shipping people look at statistics simply as historical data with limited value in planning for the future (Bharati, 2009, p.10). Ironically, by listing the number of crises having taken place since 1973, Stopford (2007, p. 5) points out that crises in shipping occur at an average interval of six years and that the year 2007 was apparently the sixth year since the last one. Today, looking back and pondering over Stopford's reflections, while actually experiencing the repercussion of the global crisis 2008/09, should his analytical approach be reckoned as merely a stroke of luck or indeed the potential of statistics as a reliable guiding tool for future investment in shipping?

2.6 Government intervention

Though state interference is not usually favoured by the shipping industry (Basey, 2009, p.19), it is important for governments to understand the fundamentals of the industry to ensure that it is supported in an optimal manner.

As argued by Gray, T. (2009, July), shipbuilders may not be held responsible for taking on new building contracts. In parallel shipping banks may not be blamed for supporting the industry in its investment activities. Both parties are driven by the commercial needs of the market. They are not regulatory bodies. Similarly, as long as a particular market produces good returns, investors will continue to invest.

Alternatively stated, shipping cycles are not created consciously by the dominant players given that they are themselves unaware of the likely ceiling or floor. It is, in fact, the interplay of market forces of demand and supply under conditions of uncertainty, commonly referred to as the "invisible hand", which actually trace the route of shipping freight rates.

The global crisis of 2008-09 is a clear case of market failure. Market failure generates externalities. For instance, if ship yards in Asia close down, this will not only affect financial issues associated with the shortfall in funding new buildings, and the likelihood of cancelled orders, but also social problems, since these local ship yards provide economic support to whole communities.

One way of internalizing the spill-over effects of market failure is through government intervention. Stokes (1997) firmly emphasised the increasing importance of governments' as guarantors of finance for newbuildings during the past decades. Under the present conditions, Earle (2009, p.788) asserts that "only government intervention, guaranteeing the value of assets and establishing confidence, could break the gridlock" and indeed the outcome of the G20, (Group of 20), is said to have surpassed expectations (Witherell, 2009).

In reality, as reported by the World Trade Organisation (ICS, 2009, p4), 17 of the G20 nations seemed to have adopted protectionist measures. However, it is important to bear in mind that, unlike regulations drafted for other domestic industries, shipping requires States to tread with caution and come up with prudent government

policies. This is because the global nature of the industry can easily transform genuine government intervention aiming to correct market failure into government failure (Clarkson, 2009; Freight transport, 2009 July).

2.7 Risk management

During the past decade, ship-owners were fervently engaged in applying hedging techniques in order to assess and manage risk in ship financing (Drewry, 1996, p.73). Still, the current global crisis has been declared as one of the greatest risk management failures in recent history (Earle, 2009, p.785). Applying the value-at-risk analysis to the dry bulk market, Lu et al's (2007) insight of the lessons learnt from financial crises is limited to the dollars lost due to the poor practice of risk management. The present turbulence in commercial shipping has instead clearly shown how deficiency in risk management has far wider implications than financial loss (Lansley, 2009, p.1). In fact, as in the case of maritime casualties (O'Neil, 2000), it also affects the lives of people across the globe (Alave, 2009; Ayrazyan, 2009; Culpeper, 2009; Groom, 2009) as well as environmental policies (Tsang, 2009). In this vein, Stopford's statement that "shipping companies, like ships, must be built to survive storms" (2007, p.14) and Maersk's philosophy which says that "no loss should hit us, which could be avoided with constant care" are surely well-founded.

To conclude, as stated in the industry report of the NIB Capital Bank (2003, p.1), even the most dominant market players of the shipping industry can neither stay, escape nor change the course of shipping cycles. However, a better understanding of the underlying dynamics might be a useful tool in enabling wiser investment and mitigating future loss.

Chapter 3 – Methodology

3.1 Selected research methods

As a result of the tested theories pertaining to crises and the current crisis being treated as a unique one, a mixed method was used. The qualitative approach included the distribution of an online questionnaire which focuses on gathering the opinions of shipping people on the key issues and a loosely structured interview method. Results obtained from the qualitative research methodology were supported by quantitative method analyses to verify to which extent the views shared by the shipping community actually hold true in practice.

3.2 Qualitative method part I- On line questionnaire Method

By definition, surveys attempt to gather information from a sample, which can then be used to make inferences about the general population. To reconcile the differing opinions to issues raised in the literature review, the questionnaire survey method was adopted. A loosely structured interview method was also attempted as and when possible within available resources and time allowed. The objective of using this approach was to obtain additional information to support the initial responses of shipping practitioners' to issues addressed by the questionnaire which included their experiences and opinions on crises in the shipping industry, reliability of statistics in guiding investment decisions, desirability of government intervention in the shipping industry and risk management issues.

3.2.1 Structure of questionnaire

Bearing in mind the time constraints and complexity of the issue being addressed, the questionnaire used consisted of 24 questions, out of which five were open ended questions and the remainder were close ended questions (Appendix 1).

3.2.2 Mode of distribution and targeted audience

The postal questionnaire method is costly and time consuming to administer. As a result the online questionnaire facility offered by the World Maritime University (WMU) Web service was used and, where it was possible to follow up by interviews, the duly filled-in questionnaires were personally collected.

Again, acknowledging the low response rate that is often associated with the questionnaire method in general, the targeted audience was selected on convenience sampling. Often online questionnaires are disregarded by recipients as electronic junk mail (spam e-mails). In order to ensure that a reasonable response rate be obtained to achieve the objective of the study, it was reckoned that the targeted audience should recognise the value of the research. As such, visiting professors to the WMU and former WMU graduates are not only experienced practitioners in the shipping industry but also a group of potential participants who were more likely to appreciate and contribute willingly to the research exercise.

In this vein, the distribution of the online questionnaire was limited to visiting professors, professors at World Maritime University (WMU) and former WMU graduates.

3.2.3 Response rate

The response rate was not expected to be 100% in spite of using selective sampling. Since the age profile and background of the former WMU graduates is confidential information, it was anticipated that some recipients of the link to the online questionnaire may not be directly involved in the commercial aspects of the industry or

they may have probably moved out of the industry. In the case of visiting professors, the possibility that they might be out of office during the period the survey was accessible online was also considered.

Overall, hundreds of e-mails were sent with the link and access code. In spite of the e-mail addresses' of the selected participants being available, it was not possible to monitor the exact number of recipients who actually received the e-mails in order to determine the actual sample size. Once the e-mails were sent, a fair number of undelivered emails were received as a result of many former WMU students' e-mail, available from the University database, being no longer active. Likewise, prompt notification of participants who were out of office was also recorded. Therefore, out of the hundreds of emails sent initially, the actual sample size was considerably reduced.

3.2.4 Expected results

With questions addressed on the crises, performance of markets and market segments, it was expected that responses would be biased to the markets the respondent may be involved in as may be deduced by the introductory questions. On the statistics and risk management issues, a favourable response was expected in general.

3.2.5 Merits and limitations

The merits of the online questionnaire were twofold. Firstly, it was addressed directly to the respondents so that there were no intermediaries' processes of the questionnaire having to undergo a series of stages until it reached the targeted person. Also, with the link and the access code being included, it ensured easy access and prompt submission eliminating the risk of responses being lost or delayed as compared to the traditional postal method. Moreover, confidentiality was totally assured. Secondly, the answers collected being available in data form not only facilitated further analysis but also eliminates the risk of errors that may be possible while feeding data manually.

However, this method is still not devoid of some inherent limitations. A questionnaire, the most commonly used method of collecting primary data, remains the one associated with the lowest response rate, although, the reasons of being cumbersome and costly, as in the case of a postal questionnaire, may not apply here. In this case, possible reasons for a low response as mentioned earlier, may be the unavailability of the respondents when the survey was open, the respondents having moved to some other sector over time and probably due to limited interest in the issue being addressed.

3.3 Qualitative method part II - Interview

The interview, which is a face-to-face exchange with a particular participant, was used to supplement the input obtained from the distribution of the online questionnaire. An online questionnaire is a one-sided communication which allows the collection of data in quantity but in case there are queries, for instance, one answer in one section not being very compatible with the answer to some other leading question, it is not so clear for further analysis or interpretation and important information may be lost. So, following the questionnaire response by a face-to-face exchange, as and when possible, allowed the flexibility to seek additional clarification and explanation as deemed reasonable under the loosely structured interview method.

3.3.1 Loosely structured interview method

A loosely structured interview was convenient for this purpose as it was being used as a supplement to the main method of collecting primary data, which was the online questionnaire as described above. The duration of the questionnaire being filled in and the interview which followed was split between 10 and 20-30 minutes respectively.

The interviews conducted were recorded with the approval of the respondents and transcribed for analysis (Seidman, pp. 97-99). In situations where recording was not an option, the notebook and pen option was used and the results were presented as briefs on the key issues.

3.3.2 Snowballing method

The selection of the participants for the interview was again based on purposive sampling (Seidman, pp. 45-48). The e-mails addressed were to a broad range of practitioners in the shipping industry. This is because it was understood that though the financial crisis and investment in ships-related issues may be commercially oriented, the impact of the crisis and its resulting implications affects one and all in the industry. As such, having the views of shipping people from varying backgrounds would be interesting and possibly worth considering in coming up with risk management strategies in the future.

As such, the selected participants were from shipping companies, shipping finance institutions, regulatory and educational bodies.

The opportunity of interviewing the chosen participant was made possible through the use of the snowballing technique. This is especially convenient in cases whereby only a few individuals are available as appropriate participants for the survey being conducted. Consequently, as new dimensions of the issues are discussed in earlier interviews, to ease the flow in collecting data, the names and addresses of others who might also fit the sampling requirements are asked for; so that eventually one participant leads to the next one based on the analogy of the increasing size of a snowball when rolled down a snow-covered slope from which the technique derives its name (Seidman, 1998, p.47). In this context, the purpose of using the snowballing technique was twofold; firstly, to increase the sample size as may be inferred by its definition, and secondly, to vary the selection of participants as such so that it be as representative of the industry as could be.

3.3.3 Merits and limitations

The merit of the purposive sampling using the snowballing technique is that it ensures a higher response rate than is usually possible if requests for interviews are addressed

directly. The shipping industry being characterised as being secretive in sharing information, trust becomes a critical criterion in obtaining participants consent for interviews. As such, the snowballing technique acts as a buffer in managing the excessive caution that may be exercised under normal circumstances.

The main limitation of this method is the likelihood of the results obtained being regarded as biased and thus defeating the purpose of the research. However, as mentioned earlier, surveys are used to infer some characteristics which are expected to be common in general. As such, though the results may not be totally unbiased and be subject to some limitations, they are still believed to be reasonably satisfactory in at least reflecting the general tendency of the key players in the industry (Patton,1990 pp.277-359).

3.3.4 Research ethics

Unlike the online questionnaire methodology where confidentiality was fully assured, in the case of the interview method, the identity of the participant is known. In order to abide by the principles of research ethics and not to cause any prejudice to the participants of the face-to-face exchange on the subject, their anonymity is preserved by using pseudonyms (Siedman, 1998, p.56).

3.4 Quantitative method

The online questionnaires, including the use of a print version in conjunction with the interview methods in a number of cases, were both instruments of the qualitative research methods. In the literature, however, qualitative research is often condemned as being subjective due to its inherent limitations. For instance, theoretically speaking random sampling is expected to ensure that the sample is representative of the general population. For instance, purposive or convenience sampling is assumed to be prone to partiality and the convenience of the researcher. As such the end results are thus not truly treated as a very representative sample of the general population's standpoint. In order to neutralise this possibility in this study, some elementary statistical analysis is

conducted to supplement and validate the results obtained from the qualitative methods. Moreover, since one of the issues being analysed includes the value of statistics in shipping, by comparing the results obtained from both the quantitative (based on secondary sources of data) and qualitative method (based on primary sources of data), it would be interesting to identify the gap, if any, in practice.

Yearly data were compiled from Drewry's monthly publications. This included the figures for newbuilding prices and second hand prices from 2002 to June 2009 for containerships of 3,500 teu and from 1996 to June 2009 for Capesize vessels to reflect the bulk market and Very Large Crude oil Carriers (VLCC) to be representative of the tanker market. Data regarding the number of transactions in the newbuilding, secondhand and demolition markets and size of fleet and order book on the supply side for the dry bulk and tanker markets, were also extracted.

Chapter 4 – Analysis

4.1 Data analysis and findings

From the reduced sample size (i.e. reduced by those that could not be delivered), the survey yielded a total of 80 responses. Out of these, 56% were duly completed questionnaires with valid responses.

The results of the analysis conducted by applying the methods described in the previous chapter are initially presented separately. Feedback obtained from the qualitative research method and those inferred from secondary data by applying quantitative research methods are later combined to reach a reasonable conclusion.

4.2 On line questionnaire

Summary of results:

Questions addressed through the online questionnaire methodology were intended to contribute to the literature on shipping and crises in general as well as drawing additional input from experiences of competent shipping people in the industry. The target group (as specified in chapter 3), were practitioners involved in the different markets and market segments respectively.

Feedback obtained was helpful in providing a good insight into the shipping industry and on how far theories attributed to the industry are actually dealt with in practice.

The balance between the length of the questionnaire and response rate was seriously considered as it is a common belief that the greater the length of the questionnaire, the lower the response rate. In this context, the results of research conducted by Yu & Cooper (1983, p.39) clearly showed a very weak relation between these two variables. Moreover, the point of having 100% response to a short list of close ended questions was not the primary objective of the research. A reasonable response rate but answers, whereby respondents actually address the main concerns of the research, were the key priority. In line with the mentioned objective, therefore, the 45 duly filled in questionnaires were deemed sufficient.

- (i) The first five preliminary questions were intended as a warm-up exercise to build up the interest of the respondent. In addition, it also provided the background of the respondent so that it allowed a more objective analysis of subsequent open-ended questions. Answers to those questions, were, therefore, analysed ‘with a pinch of salt’.

In reply to the first question regarding the length of experience in the shipping industry, most of the respondents had more than 10 years of service. Given that crises generally span a period of 7 years on average, having the greatest proportion of respondents from the category of those who had more than 10 years of service in the industry added value to the expected outcome of the survey.

The overall proportion of respondents, sub-divided in terms of their respective length of experience in the shipping industry is illustrated in figure 3.

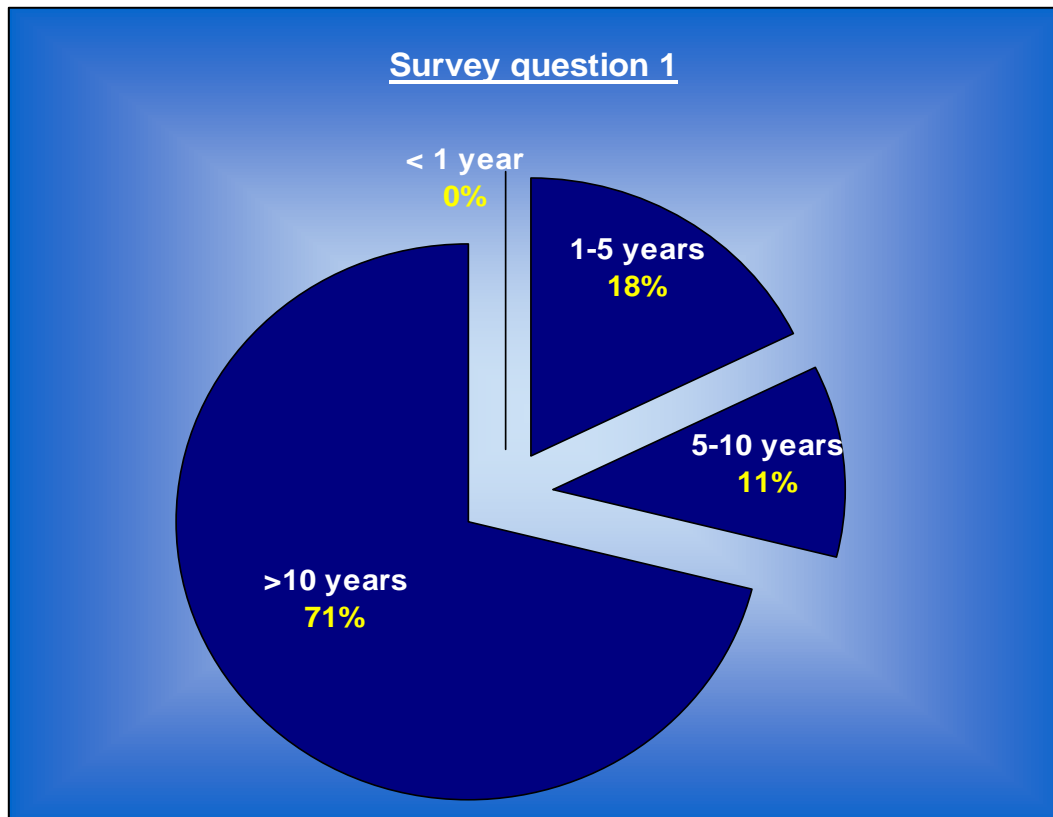


Figure 3: Length of service of respondents' in the shipping industry
Source: Questionnaire Survey Results

- (ii) The second question looked into the shipping sector in which respondents were involved. Interestingly, most of the respondents were employed in sectors of the industry, other than the new building, sale & purchase and demolition market.

Figure 4 shows the employment distribution of the respondents in the industry with respect to the specific shipping markets.

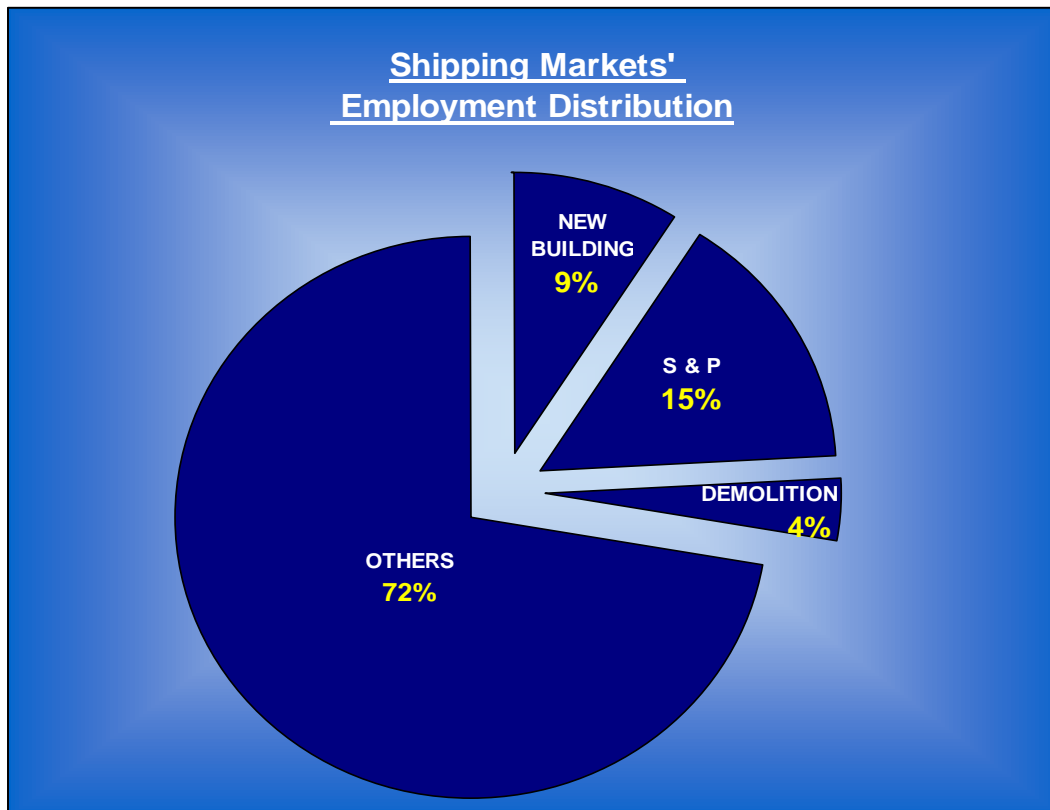


Figure 4: Employment distribution with respect to shipping markets
Source: Questionnaire Survey Results

The list of other sectors included respondents employed in commercial entities such as chartering, ship brokering, marine insurance, port and shipping agencies, container shipping operators to bank financing of shipping and offshore assets as well as those who were part of the maritime safety and security areas of shipping such as ship registration, maritime administration and definitely the maritime training and education sector provided for professors at the World Maritime University and its visiting professors.

From this result, it is also realised that in spite of the broad sub-division of the shipping industry into four key markets, the influence and contribution of the ancillary services providers to the smooth operations of those shipping markets are invaluable.

(iii) The main interest of the study in identifying the market segments respondents were involved in was to support the analysis in responses of the three selected market segments which were tanker, dry bulk and the container trade. The views of the participants, who were fairly familiar with the sector, though they were not directly employed in the selected three sectors, were also taken on board. This variation was captured by the "other/s" category amounting to 30% as shown in figure 5:

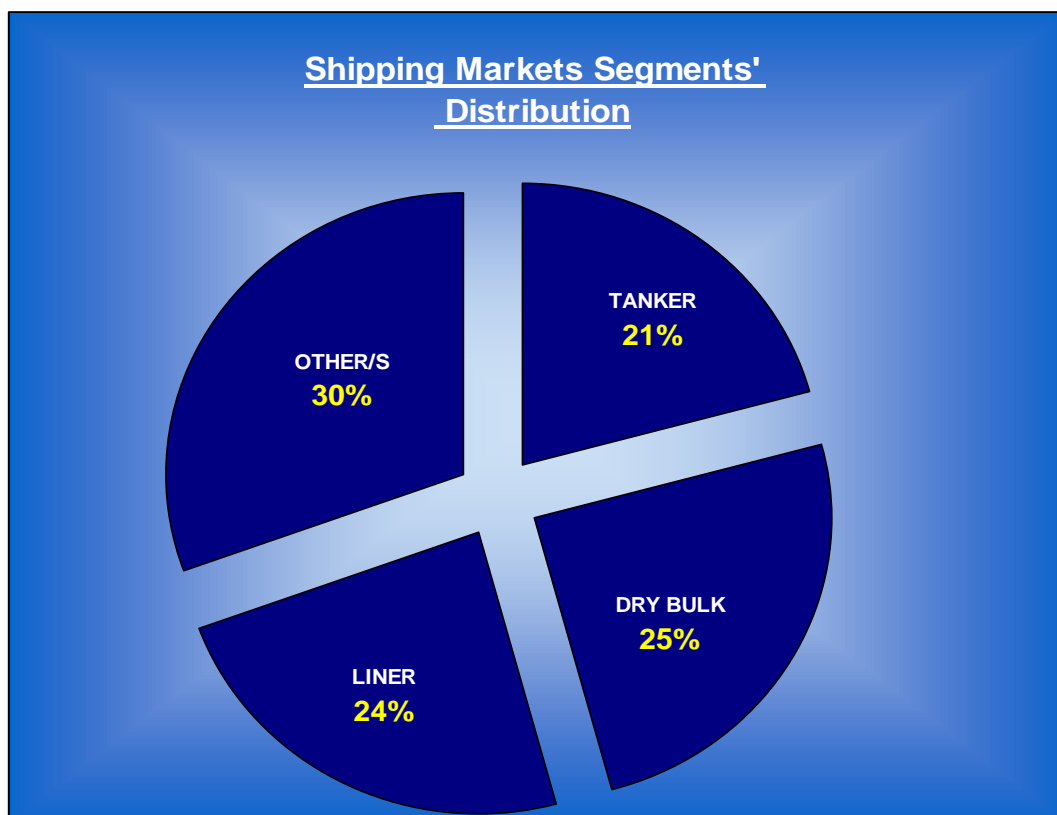


Figure 5: Employment distribution for specific shipping market segments

Source: Questionnaire Survey Results

In this category were the employees from offshore companies, ship registry, academic staff, financing institutions as well as participants who were involved in the selected sectors as well as sectors such as the LNG trade.

(iv) With regards to trading routes, while coverage of the liner trade was mostly on the Asia-Europe and Trans-Atlantic routes, overall the liner market segment seemed to

have a global coverage which included regional trade such as intra-Scandinavian trade and US-Caribbean and the Indian Ocean. Similarly, for the dry bulk market segment, the Asia-Europe and Trans-Atlantic route were its principal trading routes.

On the other hand, the tanker trade seemed to have a global coverage. The key reason behind looking at the shipping routes was to relate the type of market segment to its particular trading routes and, subsequently, infer the economies most likely to affect this segment or to be affected in case of crises in those segments. For instance, tracing out the connection between the container trade and the US market surely explains the vulnerability of the market segment to its trading zone.

- (v) Generally, it is believed that loan financing is the most common financing option. Analysing data obtained from primary sources, according to the results obtained, at first seemed that although loan financing is more popular than investment in cash, leasing and equity financing, there appears to be the possibility of another means of financing being even more popular.

However, after closely reviewing the results of the questionnaire, it was found that the "Other/s" option, amounting to 30% was in fact the same percentage (%) as the proportion of participants who acknowledged being familiar with the key market segments(as shown in figure 5). Since they are not directly involved in the financial side of the business they preferred to abstain from commenting on the means of investment. Thus, as portrayed in figure 6, although at first glance, it is ambiguous, the last column was retained, simply to show the consistency in response of participants (in relation to their background) and the data collected.

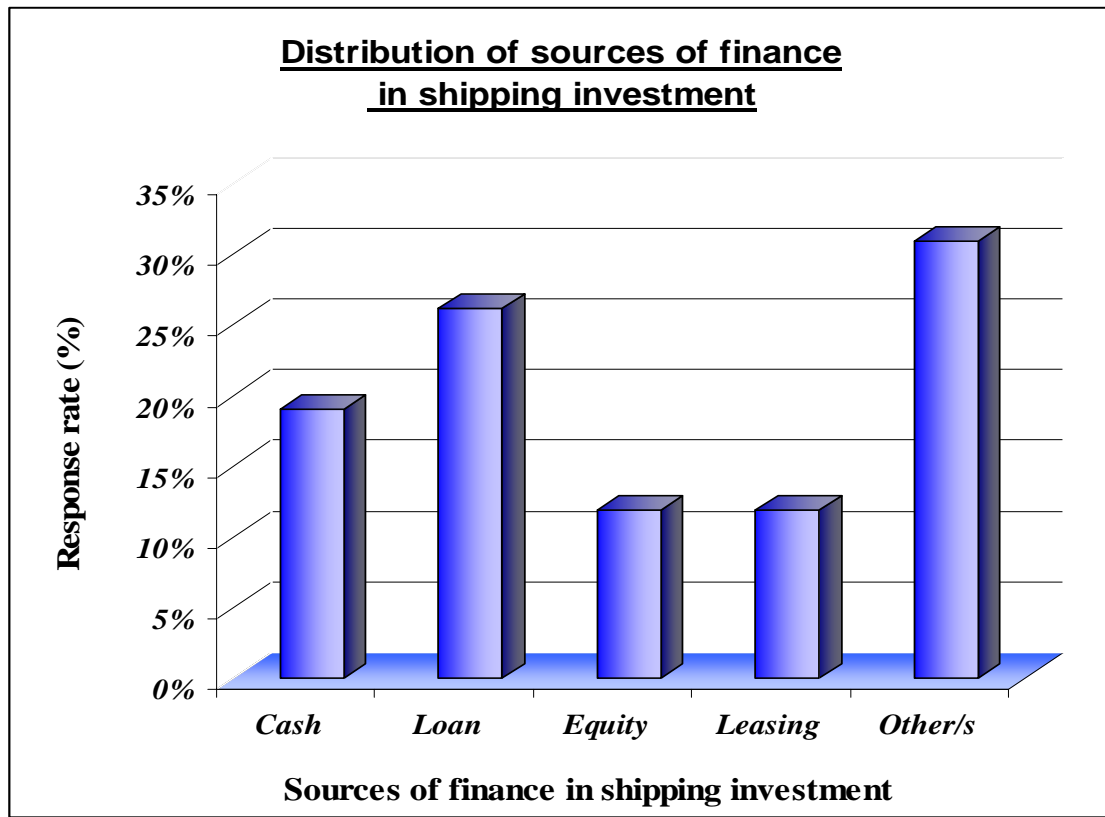


Figure 6: Distribution of sources of finance in shipping investment
Source: Questionnaire Survey Results

(vi) Questions 6 to 16 were theoretical queries on crises and shipping, based on the respondents' personal experience in the industry and their understanding of this phenomenon. In reply to whether past crises had affected the organizations they work for, 73% of the respondents were of the view that indeed they did have an impact. The remaining 27% of negative replies were found to be from those respondents who were either from the academic field or the sale and purchase market. This outcome was reasonable given that it again accentuated consistency in the results being analyzed.

(vii) In the survey, to differentiate between the two crises being examined, the financial crisis was subsumed to be a consequence of financial institutions' operational failures while the shipping crisis was considered equivalent to consequences of volatility of freight rates. In comparing the impact of the financial

crisis and shipping crisis independently of the industry, 42% of the respondents believed that the financial crisis was more critical in influencing the shipping industry's performance while the rest of the participants were more concerned with the effects of the shipping crisis.

In pursuing the discussion during the interview method as availed by opportunity, it was understood that the distinction in opting for financial crisis and shipping crisis was based on the time factor the respondent had in mind while answering the question. Those respondents who were considering the effect on the shipping industry's performance in the short term opted for the shipping crisis while those respondents having a longer time horizon in mind chose the financial crisis.

The financial crisis, it was argued, not only affected both the demand and supply side of shipping services, but its effects also stretch over a longer span of time. While a squeeze in available liquidity in the market constrains demand in the commodity market, demand for shipping services, given that it is a derived demand, is affected proportionately. Similarly, supply of shipping services is restrained with limited finance being offered for investment in new buildings. However, in the case of freight rate volatility, the impact is visible as soon as the crisis happens in terms of the spiral effect on charter rates and the value of vessels. Indeed the subsequent frenzy among shipping stakeholders in terms of charter agreements not being renewed upon expiry, renegotiations with bank institutions and greater likelihood of bankruptcies of shipping companies (as cost recovery, in view of very low earnings in terms of freight rates becomes difficult) are common repercussions.

(viii) The next two questions were an attempt to investigate how far shipping people view the current global recession as being a bane (i.e. problem) or boon (i.e. blessing in disguise) to the industry. Herewith, the 'Likert scale' of measurement was used to allow respondents to specify their level of agreement. As many as 69% of the

respondents had no doubt that the current global crisis is a tragedy for the shipping industry.

(ix) In answer to the next question which enquires the extent to which the crisis was perceived as being a "blessing in disguise" to the industry, the response was relatively evenly distributed between those who believed that it was definitely a "blessing in disguise" and those who were certain that it was no blessing at all to the industry.

During the interview session, upon enquiring, it was noted that the reasons for being firm on the down side of the crisis were numerous and fairly obvious in terms of vessels' being laid up, cancellations of orders, bankruptcies and, above all, the loss of trust and confidence in the market. On enquiring on the boon side of the argument, the expected results were the "cleansing" effect of the crisis in terms of the green field shipyards that were spreading out very quickly, influx of non-shipping speculators in the industry and the surge in paperless trade that were the outcome of the boom that preceded.

In reality, the positive response emanated mostly from shipping people engaged on the crewing and manning side of the industry. These participants were mainly concerned with the manning crisis which was looming for the industry during the boom phase. Apparently, it is believed that the current downturn is allowing the shipping industry a grace period to take care of this dilemma, if the time is used wisely, and provided that investment in training is not the first cost element to bear the brunt of cost-cutting policies in shipping companies in the face of crises, as has been witnessed during former crises.

(x) Referring to the question of vulnerability of markets, separately, in the face of financial crises and shipping crises, it was interesting to note that the demolition market was viewed as being least affected in moments of crises. In the event of a

financial crisis, 82% of the respondents were of the view that the new building market was most vulnerable. It is indeed the most capital intensive area of shipping as emphasised by Cushing (1991, p.2) in his doctoral thesis. As liquidity constraints are felt by the industry, the propensity to invest in new buildings is reduced considerably; significantly impacting the new building market.

On the other hand, in the case of a shipping crisis, it was observed that the vote by respondents as to the vulnerability of new buildings and sale and purchase markets was almost equivalent. This observation was reasonably in line with the theories of ship investment. Indeed the financial constraints will freeze new orders until the financial market recovers. However, freight rate volatility, as triggered by the shipping crisis, first affects the second hand market. In the booming phase, given the time lag between the placing of an order for a new ship to the actual delivery of the vessel, the existing fleet's value is appreciated considerably.

Consequently, as soon as charter rates collapse, the value of second hand vessels is no longer as attractive so the ship owners' market is suddenly turned into a charterers' market, whereby it is ships chasing cargo instead of cargo chasing ships. Thus, along with new building orders being postponed, cancelled or renegotiated, secondhand vessel values go down and carriage contracts are no longer renewed as easily as before, upon expiry.

(xi) After analyzing the impact of the current global downturn on the individual shipping markets, the next two questions of the survey were designed to look into the implications on the selected shipping market segments, which were the tanker trade, the dry bulk market and the liner business. In assessing the impact of the financial crisis on those segments, 45% of the respondents selected the liner trade as being most vulnerable. The reasons were based on the excess tonnage constantly permeating the market and mainly with the nature of commodities commonly traded through the liner services. Faced with financial constraints, demand for manufactured

goods is among the first to take the hit as people will still need energy to survive and raw materials for construction.

On the other hand, considering the impact of freight rate volatility on the chosen shipping market segment, the tanker trade and the dry bulk market were perceived as being most exposed. Unlike the container trade, in the tanker trade and the dry bulk sector, the *Worldscale* and the *Baltic Dry Index (BDI)* are benchmarks' used to reflect the freight market demand at the time of fixture. Consequently, these two segments are more sensitive to the volatility of freight rates as a result of the transparency projected through the indexing system.

(xii) As elaborated in the literature review, some shipping experts believe that the current global crisis is part of a typical shipping crisis while others believe that it is a new phenomenon. In seeking the views of the available respondents on this issue, 67% of the respondents agreed that it is a new phenomenon that the industry is being exposed to, while the remaining 33% believe it is no different from previous crises. The reasons given to support the views of the 67% were globalization and the revolution of information technology over the last few decades. With increased globalization and liberalized trade, the inter-dependence of economies worldwide has grown considerably so that happenings in one part of the world affect the rest of the world by default through the domino effect, which was not the case in the crises of the 1980's, for instance.

In tracing the development of the ongoing global crisis, the suggested reasoning appears valid as the source of the crisis is examined. The crisis started with the bubble bursting in the sub-prime mortgage market in the United States, which was transmitted to the financial institutions, as there were growing numbers of foreclosures, and eventually the whole world economy, as a result of the interconnections and interdependence between nations in global investments.

(xiii) The next two questions were designed to infer the level of risk analysis applied to investments in the selected market segments. Analyzing the reactions of the differing market segments in response to the global crisis, (which considers both the impact of the financial and shipping crisis combined, unlike the similar previous questions), 48% of the respondents were of the view that the liner trade was the most reactive while the tanker trade was the most proactive. The chaotic condition of the liner market following the initial shocks of the crisis were deemed as being obvious evidence of the no risk analysis system being in place. Similarly, the stability of the tanker charter rates over a fairly long time following the shipping crisis in the industry was gauged as being the result of the foresightedness of tanker owners.

(xiv) The subject matter of question 17 was on the usefulness of shipping statistics published by reputed research organisations like Clarkson, Drewry, Fearnley and Simpson Spence & Young Shipbrokers (SSYs). Investment decisions made by management are usually made on the basis of future forecasts and shipping statistics produced by these organizations, which are considered to be a good benchmark, theoretically speaking. In this vein, the survey questionnaire was used to explore the extent to which these publications are deemed as being useful tools in guiding a management investment decision in practice.

The majority of the respondents, as reflected by the 57% response rate, indicated a lukewarm appreciation of those publications by choosing the option 'somewhat'. According to this group of respondents, available data from these sources are good records of past transactions in the industry. It is asserted that historical data are of limited value in shipping. Most of the time, sincere attempts are made to forecast the market, however, the reliance on those forecasts as rational investors should be limited. They capture elements of the external business environment on which to base their forecast of the industry and its subsidiary markets and market segments. An investment decision in ships is mostly guided by in-house analysis and strategies and objectives of the concerned investor or investing organization.

(xv) “When the U.S stock market sneezes, the world economy catches cold!” is a popular adage investment theory. It emphasizes the influence of the U.S economy on the global economy. As reflected by the subprime mortgage crisis, which started in the USA and was eventually passed to financial institutions worldwide, the following question in the survey questionnaire attempted to explore the possibility of similar implications within the shipping industry. Based on the survey results, 38% of the respondents were of the view that this theory also replicates itself in the shipping industry.

The reasons to support this analogy were the size of the U.S market and the volume of trade absorbed by this economy, which subsequently influences the supply and demand of shipping services. However, the views of the other 38% who were not totally in agreement with the validity of this theory in the shipping sector and attributed greater weight to the imminent influence of the Chinese economy. They were of the view that the USA may be the leader of the herd in the stock market, but in shipping it is more and more the “China-effect” that is more prominent.

(xvi) “The Dow Jones U.S Index is a broad-based but investable measure of the U.S. stock market, intended for use as the basis of investment products.”

(<http://www.djindexes.com/mdsidx/?event=showTotalMarket>).

The main concern of the dissertation was issues guiding investment decisions in ships. As a result, the use of the Dow-Jones U.S index as a benchmark in guiding investment decisions in ships was investigated. The result obtained was quasi-normally distributed. At the two extremes was the same proportion of people who were convinced of the utility of this index in guiding investment decisions and those respondents who had no doubts that this index was totally irrelevant in the context of shipping. The remaining proportions of the respondents were neutral as the likelihood of its utility in the context of shipping was deemed average.

(xvii) As mentioned earlier, the remaining five questions of the survey questionnaire were open-ended. After having sought the views of the respondents on different levels ranging from the shipping industry in general, to individual shipping markets and selected shipping market segment in relation to crises, the last questions were designed to address ensuing risk management issues. Views of the respondents were gathered on the basis of their experience and thus, their perceptions on risk related themes such as ``hedging`` and ``freight derivatives``. Subsequent questions sought the views of the respondents on the possible risk management strategies that need to be considered in the likelihood of a reoccurrence of the current global crisis as well as lessons that the shipping industry should retain following the initial impact of the ongoing crisis.

(xviii) As a result of the nature of the questions asked, unlike the close ended questions, it was not possible to express answers in percentage and highlight the tendency of the general population on the key issues. In an attempt to codify the answers to these open ended questions and produce inferences, which would be as objective as possible within the inherent limitations of the methodology being applied, the technique employed by Prof. Nakasawa (2000, p.41) was considered. The process required the identification of words used repeatedly or their related synonyms in explaining the key concepts (Appendix 2).

(xix) For instance, in reply to the first open ended question, it was interesting to note that in the shipping community, hedging is still being treated as being synonymous to risk management among practitioners, as had already been observed in a study by FreightMetrics in 2003. Similarly, freight derivatives was immediately associated with the futures market in most instances.

(xx) As for the query pertaining to the subject of plausible risk management strategies in the aftermath of the turbulence in the financial and shipping markets respectively, the views were varied and quite positive. The bottom line, however,

remained uncontested. Given that shipping in general relies on the most basic laws of global supply and demand, investment in ships thrives in this very environment of uncertainty. Too many regulations or too much control will distort the risk-reward element that makes investment in the industry so intriguing so that the interest of shipping investors would dissipate as well. Being highly capital-intensive in nature, this option would certainly not be in the interest of the industry in the longer run.

4.3 Interview method

As a sequence of the interview method, a print out of the online questionnaire was circulated to a selected group of practitioners of the shipping industry. As stated in chapter 3, this exercise allowed for the possibility of seeking further clarifications and explanations on the key issues being addressed. The group of participants were resource persons from shipping companies, shipping banks, regulatory bodies as well as academic institutions.

Summary of results:

The gists of the discussions on the key issues are as follows:

- (i) *Financial crisis & Shipping Crisis – how far can it be treated as reflecting the chicken/ egg situation?*

According to most respondents, it is believed that a general world financial market affects international trade (world trade) which in turn affects shipping. Given this direct relationship between these macro-economic variables, the shipping crisis which followed was only to be expected. Regardless of whether this shipping crisis was the consequence of the preceding financial crisis or the result of the nature of demand of sea transport (i.e. derived from international trade), in the respondents' opinions, it appears that finally it all boils down to ship finance. They stated that a sound understanding of ship finance has never been more critical to surviving the downturn in the shipping industry as in the recession of 2008-09.

The other participants were of the view that the current shipping crisis is not part of the industry's normal cycle. It was forced on the industry by virtue of the banking crisis. They had strong beliefs that had the financial crisis not occurred, the shipping industry would have had a longer boom phase and the impact on the industry would not have been as overwhelming. It is true that after a boom phase, a recessionary period usually follows. Thus, as shipping practitioners, realistically they were anticipating the boom would soon come to an end. However, the pace at which the cycle changed its direction, and the extent to which it actually ended up affecting the industry, were very much unanticipated.

(ii) *Variation in responses of individual shipping markets and selected shipping market segments explained*

The responses on the differing impact on the shipping market segment were based on the nature of the commodity traded. As observed earlier, the container trades are focussed on manufactured goods/finished products; the dry bulk sector caters for raw materials and the tanker trades energy. Therefore, as the financial crisis pervaded the shipping industry, the initial shocks affected mostly the demand for manufactured goods so that the container market was expected to take the first hit. However, this time, surprisingly it was the dry bulk market which crashed overnight. It was not because the demand for investment projects fell rapidly but rather the bursting of the over-optimism that had inflated freight rates and prices of dry bulkers to highly artificial levels which were not sustainable, as had been the case with the sub-prime mortgage crisis which developed in the United States in 2007 and 2008.

The tanker industry was perceived as being the most proactive in general. Is this really a fact or the result of sheer coincidence? It is true the tanker industry had experienced the price of over-optimism during the disastrous crisis of the 1980's. Yet, whether the sustainability of its market freight rate in spite of the adverse market situation was the result of lessons learnt from the past is certainly not very clear-cut. Instead, the stable market conditions of this segment were believed to be more the

consequence of the long term contracts which are usually concluded for carriage of energy resources and the international regulations requiring the scrapping of single hull tankers within the allowed time schedule. The stringent operational requirements for tankers also act as a significant barrier to the entry of new investors. According to a few participants, the fluctuations in oil prices also influence the demand for tankers and are thus, also assumed to have been instrumental in explaining the lag experienced by this segment to actually feel the impact of the crisis.

(iii) Usefulness of shipping statistics in aiding investment decisions in shipping

Views on the usefulness of shipping statistics in guiding investment decisions in ships were diverse. For a certain group of shipping people, they were undoubtedly a valuable tool in guiding investment decisions in shipping. They reflect the development of the market and as such they provide a relevant benchmark which, supplemented with an investor's individual perception of the market and his/her risk appetite, enhances the value of investment decisions made in ships.

On the other hand, some shipping people were convinced that historical data are simply for the record and to better understand what has already happened. They are, therefore, of very limited value in aiding investment decisions in ships for the future. They argued that due to the time lag which is faced from compilation of the data to their actual publication and eventual distribution, the value of the information has already diminished. Over time, new elements are introduced so that reliance on these statistics should be guarded.

Others were neutral on the use of shipping statistics as a basis for investment decisions, giving that for them a good insight into the prevailing market conditions, the extent of freight rate volatility and prospects for the future, coupled with the experience of the key participants and good in-house data analysis, are more practical tools in guiding investment decisions in ships than sheer speculation.

(iv) *How far is government intervention desirable in shipping?*

Governments are elected by the general population of particular nations. In this context, the sound intentions of governments' attempts to support their domestic industries were not disputed. In general, the macro-economic objectives of government are conflicting. In moments of crisis, they become more sensitive. Actions taken at the local level to contain the impact of crises may easily be construed as perpetuating protectionism at the international level.

This is often the dilemma of the shipbuilding sector in shipping. In the initial stage, yards may still survive as a result of the orders placed earlier on but gradually, as cancellations of new building orders and the renegotiation of deliveries build up, the plight of shipyards makes them vulnerable. In countries like China and South Korea, the losses faced by this sector, be it financially or at a socio-economic level, have been tremendous. Ironically, therefore, even though financial assistance to this sector would only add to the existing problem of excess tonnage of the shipping industry, the respective Governments were forced to extend their financial support.

However, it was also asserted that shipping in general can do better without or rather with limited government intervention during the normal course of business. In case they are compelled to intervene, as under the present tumultuous conditions, it should only be done following serious consultation with the industry.

(v) *Risk management strategies for the future*

In spite of most shipping markets being affected by the global recession, there was general consensus on the fact that diversification is a good risk management strategy. For the past few years, based on the portfolio theory, there have been increasing tendencies towards diversification in shipping investment. More and more shipping companies have been widening the base of their operations by investing in several market segments instead of specialising in one particular segment. For instance, presently companies who had diversified their business operations are expected to be

in better shape than companies specialised in a particular segment. As demand for manufactured products, cars for instance, fell drastically the company could still offset its losses incurred in this segment by the relatively more steady earnings from its tanker trade, unlike the pure car carrier companies, which had "all their eggs in one basket". Moreover, the change in USA's saving pattern, protectionism and effects on financial regulations are also expected to influence existing risk management strategies.

As any investment activities in shipping, diversification is also costly. As a result, over time, new financial instruments such as "hedging" and "freight derivatives" have been introduced to meet the highly capital intensive needs of the shipping industry. It was interesting to observe that hedging is treated as being synonymous to risk management by most shipping practitioners.

Opinions on freight derivatives were divided. Some shipping practitioners were of the view that the use of freight derivatives is doing more harm to the industry than good. The use of freight derivatives, it was stated, was driving the industry from its primary goal of providing a service and instead more towards "gambling" activities. Proponents of freight derivatives argued that although, during the present shipping crisis, the use of freight derivatives may not have shown results, it was not the instrument which was flawed, instead it was the users who blindly invested in those instruments without realising the entailing implications who were at fault. As a result, proponents of the freight derivatives market strongly believed that the effective use of these tools requires specialised human resources and a sound knowledge of the market.

4.4 Statistical analysis

Based on the inherent limitation often associated with the questionnaire method, the conclusion that may be drawn is that answers to the selected research questions are quite subjective. The way they are answered reflects the position the respondent might

be operating at. For instance, as noted through the interview approach, while brokers are fairly confident with the use of Forward Freight Agreements (FFAs) as a hedging tool, the traditional ship owners see them as a serious threat to the ‘real fundamentals’ of the shipping industry, as they believed was shown by the current crisis.

To rationalize the results obtained from the online questionnaire and interview methodology, an elementary statistical analysis exercise was attempted to correlate the results obtained in practice by using data published by Drewry.

The theory postulated by sea transport economics identifies freight revenue as the main source of cash for shipping companies. Over time, it has been established that this wave of cash flow connecting the shipping markets is in fact the main driver of shipping market cycles. Subsequent relationships were also documented between the specific shipping markets (Stopford, 2009).

A strong correlation was noted between freight rate fluctuations and the ensuing pattern followed by the second-hand prices of vessels. Similarly, the relationship between new buildings and second hand vessels prices is closely connected. As freight rates get higher, the values of second hand vessels against new buildings appreciate continuously and their prices build up until they reach a point where the gap between the values of new buildings against the second hand vessels’ price is no longer significant and, therefore, investment in the new buildings stand out as a more viable option. In fact, in 2007-2008, the second hand prices of modern dry bulkers were well above new building prices (even though new building prices had also risen).

The response of shipping markets in the three selected market segments (i.e. container ships, dry bulkers and tankers) following the analysis of data compiled from Drewry is presented below.

(a) Container ships' market segment

Investment in ships start with the orders placed for new buildings. In this vein, an overview of changes in the worldwide position of shipyards in general would be sensible. While in the 1970's European countries and Japan were the major shipbuilding nations, South Korea became the number one shipbuilder nation in 2002. In 2004, with the growth of the Chinese economy gaining momentum, China had announced that it intended to be the world's biggest shipbuilding nation by 2015 (Smith et al., 2008, pp.68; Stopford, May 2004).

Referring to the container market segment, five years later, based on available data as at 31 July 2009, as shown in figure 7, overall, although South Korea had maintained its position as the number one containership builder, it is being very closely followed by the China.

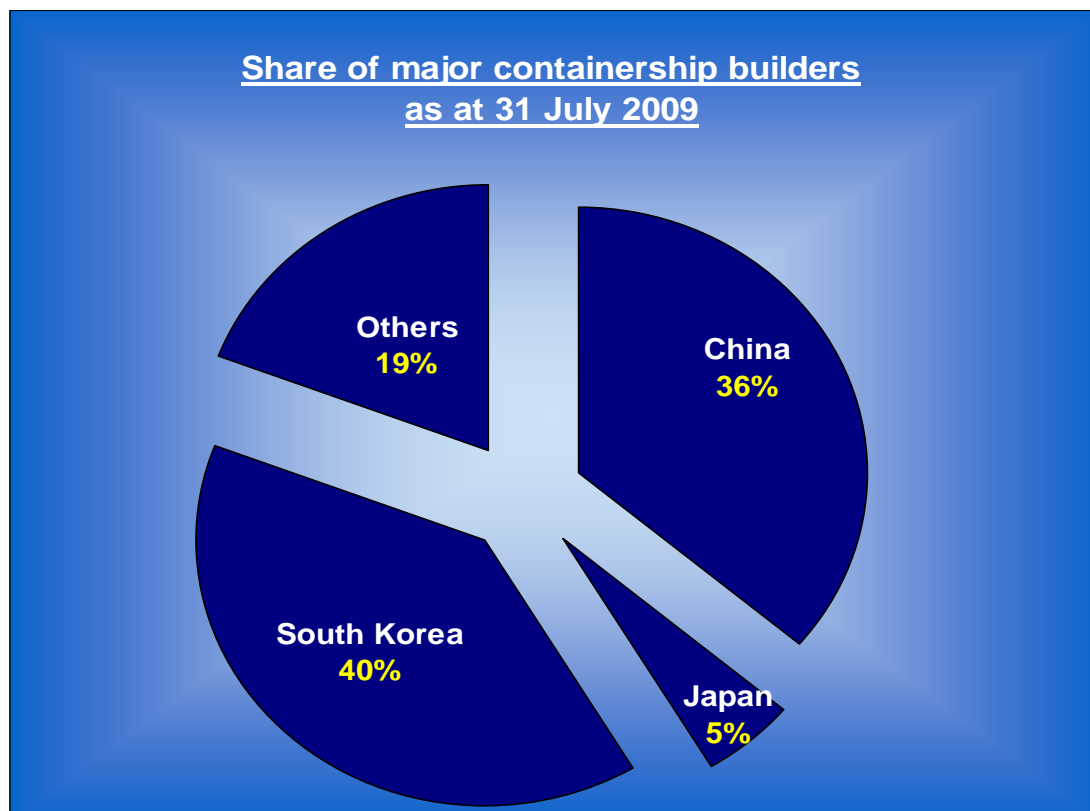


Figure 7: Market Share of major containership builders as at 31 July 2009
Source: Graphical illustration based on data published by Drewry

Defying the common belief that the ongoing recession would affect the positioning of shipyards and simply allow the survival of the fittest, the Chinese and South Korean governments are extending tremendous support to their respective shipbuilding industries. Assuming that these domestic policies would be effective, it seems that the Chinese containerships builders would most probably be the world's biggest shipbuilding nation by 2015 as promised; especially given that presently they are already leading the container shipbuilding for vessels of a size less than 3,000 twenty foot equivalent units (teu).

Analyzing the data for containerships from 2001 to 30 June 2009, it was observed that the theoretical relationship postulated between the second hand value of vessels (10-years old) and new buildings' prices was maintained as illustrated in Figure 8.

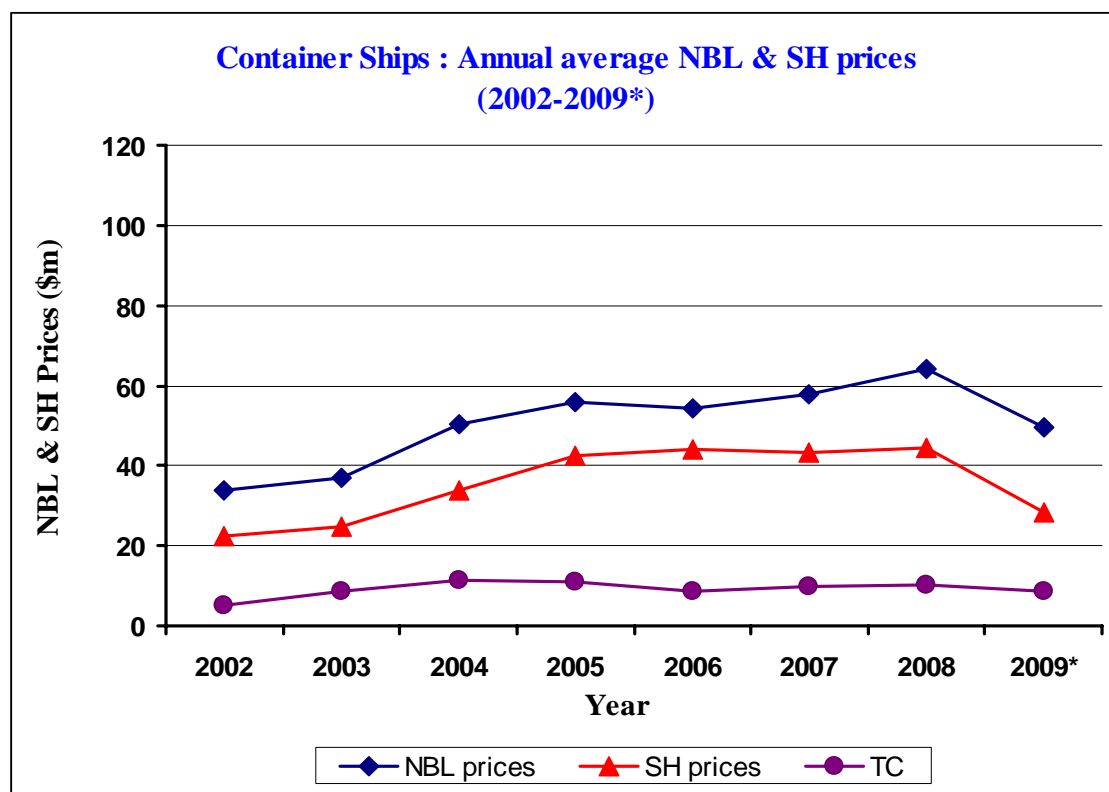


Figure 8: Container Ships: Annual average NBL, SH Prices & TC rates

Source: Graphical illustration based on data published in Drewry Shipping Insight

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

Statistically, this hypothesis was established by finding the correlation between the two variables. Correlation is a statistical measure which describes the degree of relationship between two variables and is denoted by ‘‘r’’.

The correlation coefficient between the new building and second hand prices for the container market is close to 1, which denotes a highly positive correlation. The results are summarized in table 1, as follows:

Table 1: Correlation between NBL, SH prices & T/C rates for Containerships

Correlation (2002-2009*), i.e. Sample size, N=8	r	r²	Hypotheses	P-value, Given, N=8 and Degrees of freedom, (N-2) = 6	Conclusion
NBL & SH Prices	0.93	0.86	H ₀ : r = 0 H ₁ : r>0	p = 0.0004	Since p<0.05, Reject H ₀
SH prices & TC rates	0.66	0.43	H ₀ : r = 0 H ₁ : r>0	p = 0.0375	Since p<0.05, Reject H ₀

Source: Statistical analysis based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

In table 1, the null hypothesis denoted by H₀ presumes that there is no relation at all between the two variables under consideration, namely the prices of new and secondhand ships. The alternative hypothesis, denoted by H₁, is based on the common belief that there is a strong prior theory to suggest that the relationship between new building and second hand ship prices would be positive.

However, in theory a high correlation might also be the result of chance. In order to determine the probability of the result being highly positive by chance, a one-tailed test at the common significance level of 5% is used. For the test conducted, the p-value

confirms that the odds of the correlation being a chance occurrence are less than 5 out of 100 (as shown in table 1).

Therefore, the null hypothesis is rejected here, $H_0: r = 0$ which states that there is no correlation between the two variables and concludes that the alternative hypothesis, $H_1: r > 0$ is true and therefore the high correlation between the new building and second hand prices of containerships is statistically significant.

A positive correlation was noted between charter rates of the vessels and their second hand values as well; however, they were not as strongly correlated. This may be explained by the oligopolistic nature of the container market as mentioned in earlier chapters. Freight rates are not wholly influenced by the market forces of demand and supply but instead at the discretion of the liner companies, based on their competitiveness and efficient management of their internal resources. As a result, its influence on the sale and purchase market is relatively less than assumed in other market segments, which are more likely to operate under free market conditions.

In parallel, relating the feedback from respondents on the Dow Jones index to investment in containerships, it is believed that unlike the BDI for the dry bulk market and Worldscale for tankers, it is inadequate as an indicative measure of the market. A more reliable proxy would be the movement of empty containers where the effect of underlying changes is felt as soon as consumers' purchasing power takes a hit. As such it is expected to be a more reasonable decision support parameter for investors in containerships.

So far, as a rule, the competitiveness of major containership builders and the trend of their new building and second hand values, respectively, are deemed to be the key factors which determine the size of the order book for such vessels as illustrated in figure 9.

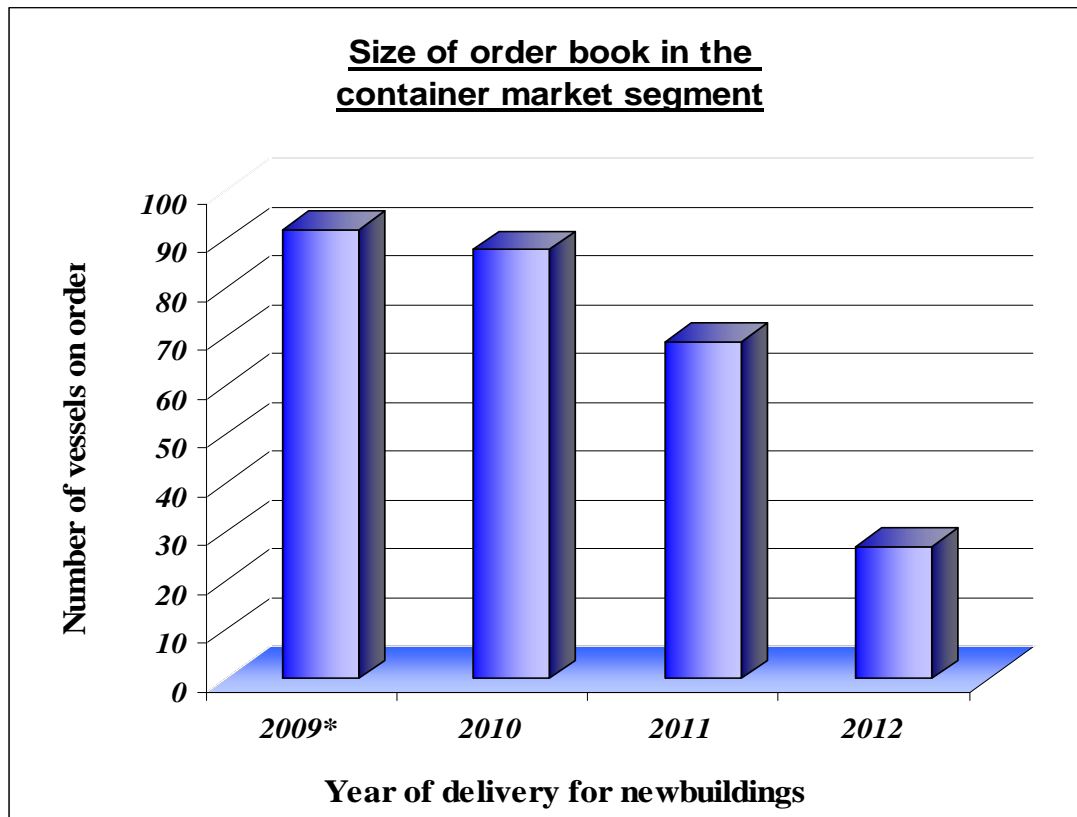


Figure 9: Containerships Order book

Source: Graphical illustration based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

The order book of containerships is visibly on the high side for the year 2009, as may be observed from figure 9, which would certainly make the already bad conditions of the container trade market worse, as new tonnage would be continuously added to the already excess supply of tonnage.

Yet, another unique aspect of the shipping industry seems to be the ability to find opportunity in every difficulty. This tendency is visible in the eagerness of ship management companies like Wilhelmsen Ships Service in launching its new service for either the hot or cold lay-up of vessels and GAC Ship Lay-Up Solutions (GLUS) offered by GAC among others, in seizing the prevailing market conditions to create new business opportunities and be actively engaged in the provision of lay-up packages.

Another observation from the survey conducted and the face-to-face exchange with shipping practitioners concerned the responsiveness of the container market to the level of consumption of manufactured goods. Apparently, in the context of the current crisis, the chaotic condition of the container trades was assumed to be a result of the squeeze in purchasing power. As such, the percentage (%) in world GDP growth was assumed to be a good proxy to measure the correlation between purchasing power and the demand for services of container vessels measured by the change in the size of the container fleet.

In figure 10, the close relationship between sea trade and world GDP is obvious.

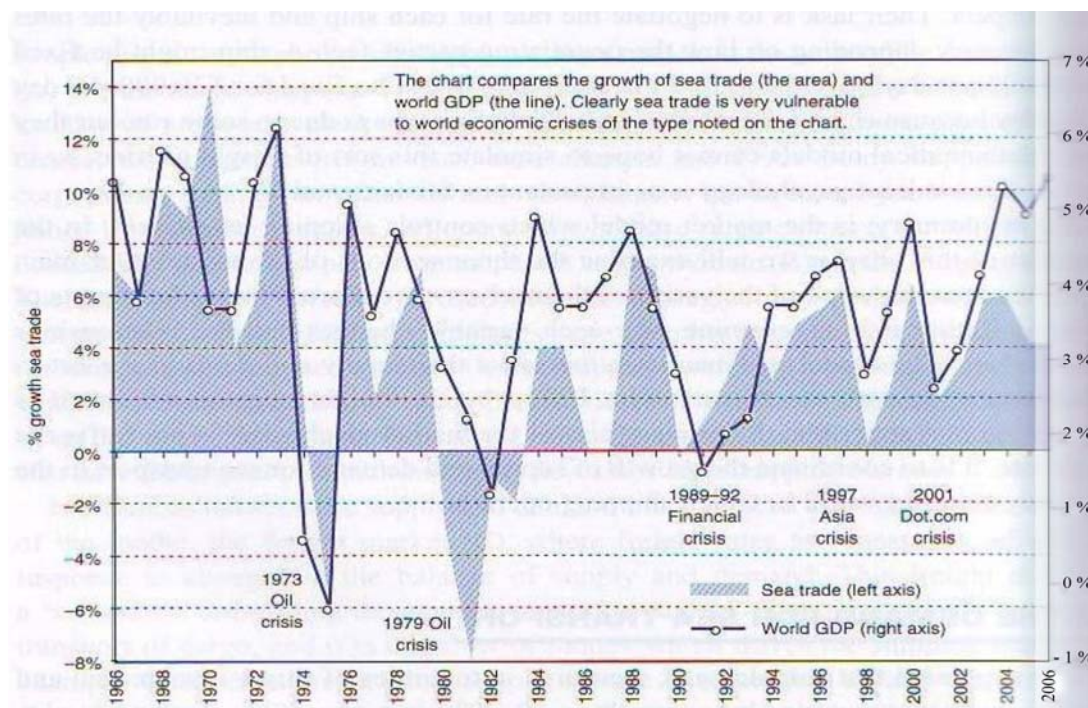


Figure 10 : Evolution of World GDP & Sea trade: 1966-2006

Source: Stopford, M. (2008, p.97). *Maritime Economics*. Routledge.

A similar result was expected to relate the rate of growth in GDP and demand for container services. Data available to measure the change in fleet size of container vessels was limited from July 2005 to June 2009. Assuming that a time lag is experienced for the change in GDP growth to transfer to higher demand for consumer

goods, a time lag of six months was assumed. As such, the annual change in fleet size was based on an average, based on the financial year principle.

Table 2 : Comparison of World GDP & Containership fleet size growth rate

Year	Annual change in GDP growth	Annual change in fleet size
2007	5 %	6.87%
2008	2.9 %	9.13%
2009*	-1.5%	9.44%

Source: Statistical analysis based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

From the summarised data presented in table 2, a negative correlation of 0.82 is obtained between the two variables. Based on empirical evidence there is a strong correlation between GDP and container growth (Bossche, May 2009; Kuch et al, 2008, p.22). The author further elaborates that if GDP growth declines by 1%, container growth falls by 10% or more. In this light, there are two ways of explaining the strong yet negative correlation between these two variables.

At first, intuitively, the difference in the direction of the correlation may be assumed to reflect the uniqueness of the crisis 2008-9. This is obviously a relatively weak supposition. A more logical explanation is that as GDP growth increased by 5% in 2007, the increase in fleet size was experienced two years later, which is captured by the 9.44% increase in fleet size in 2009.

(b) Dry bulk

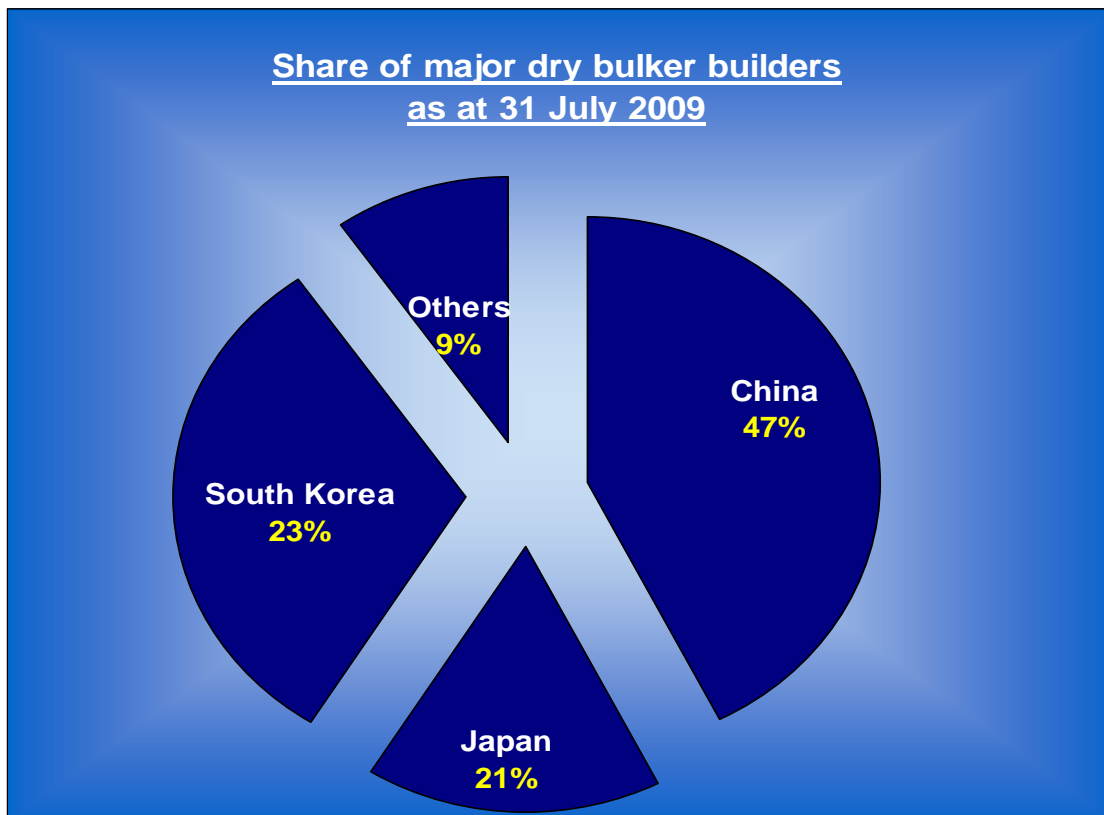


Figure 11: Market share of major dry bulk (Capesize) builders' as at 31 July 2009
Source: Graphical illustration based on data published by Drewry

According to data extracted from the Drewry publication as at 31 July 2009 and as shown by figure 11, China is the leader in the dry bulk shipbuilders' market segment. Following the tough competition that the South Korean shipyards are facing in container shipbuilding and its dominant position in the dry bulk market segment, China seems to be advancing tactically as promised to be the world's biggest shipbuilding nation by 2015.

Data for the dry bulk segment were available from the year 1996 to 30 June 2009. Using the available data, firstly the trend of the shipping crisis in this sector is considered for the period 1996 to 2007, as shown in figure 12.

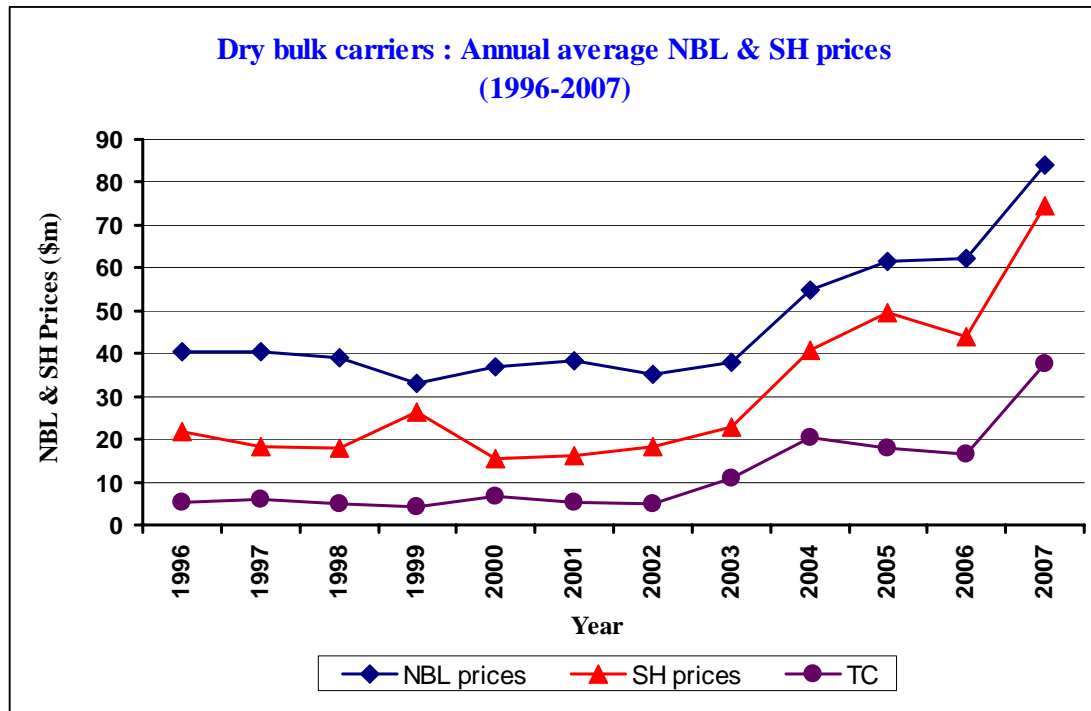


Figure 12: Dry bulk carriers: Annual average NBL, SH prices & TC rates (1996 -2007)

Source: Graphical illustration based on data published by Drewry

Obviously based on the trend being followed, especially the sharp rise in all three variables, namely, the annual average new building and second hand prices, as well as the time charter rates from 2006 to 2007, gave no firm indication at all of the crisis looming for the shipping industry. Yet, as shown in figure 13, which includes what actually happened from 2008 to mid-2009, should it be concluded that indeed shipping statistics have limited predictive value and are primarily records of historical data, as alleged by most respondents?

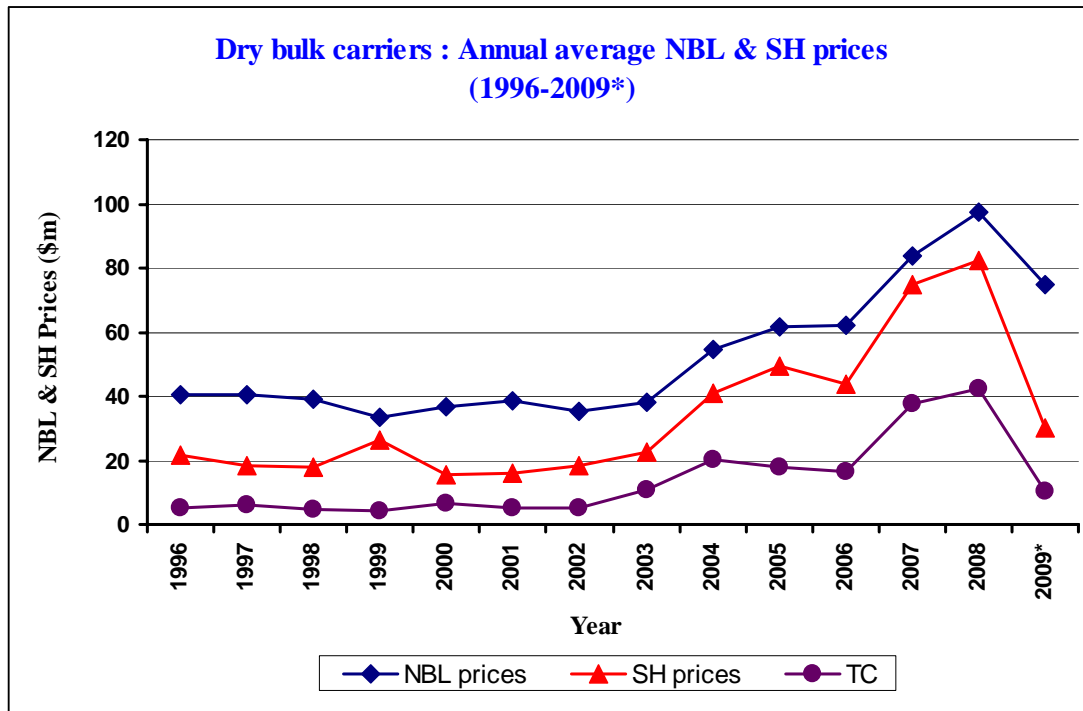


Figure 13: Dry bulk carriers: Annual average NBL, SH prices & TC rates (1996-2009)

Source: Graphical illustration based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

To further explore the predictive value of available shipping statistics, instead of the yearly average, the monthly average was taken from the years 2006 to 2007, which was taken as shown in the figure 14.

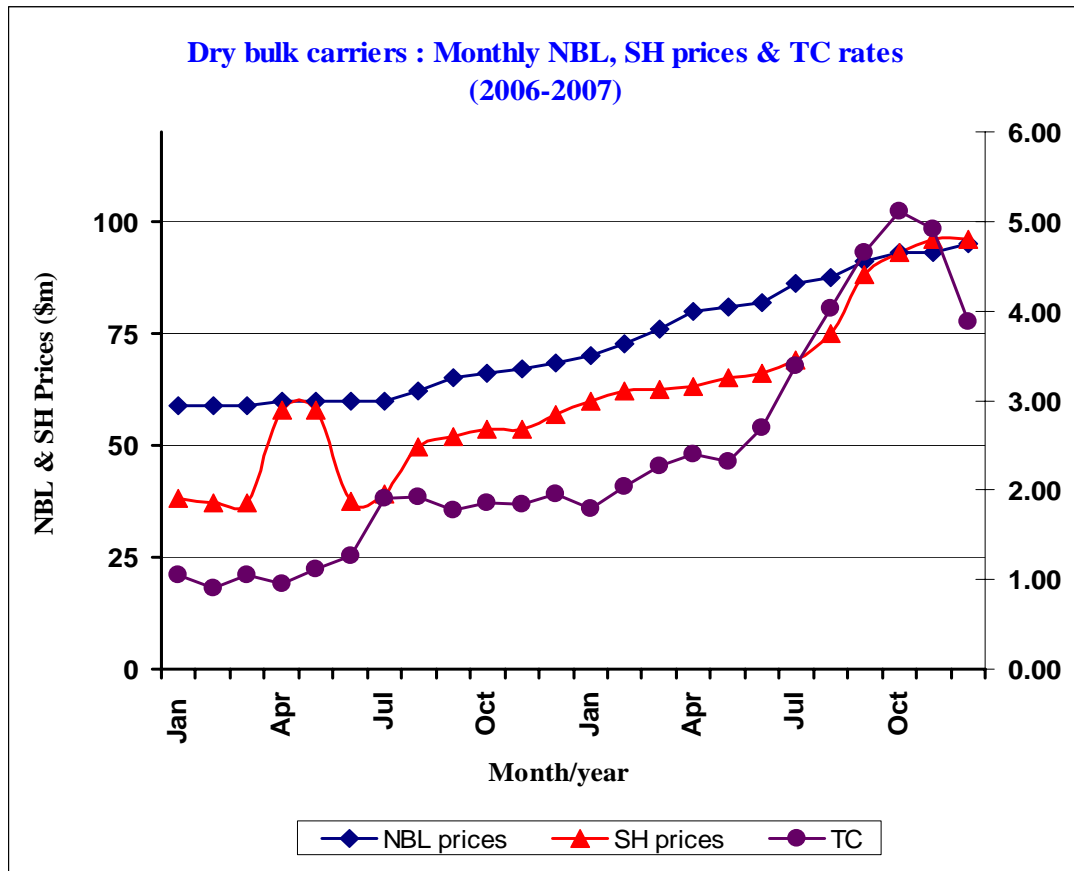


Figure 14 : Dry bulk carriers: Monthly average NBL, SH prices & TC rates (2006-2007)
Source: Graphical illustration based on data published by Drewry

Based on the graphical presentations shown by figures 13 and 14, whilst focusing on data from only two years (i.e. 2006-7), the differences in the inference that may be drawn are fairly obvious.

While the annual average smoothes out the real fluctuations in ship values and time charter rates, keeping abreast of the monthly fluctuations of the key variables provides a more realistic understanding of the tendency of the market.

Therefore, as far as the utility of shipping statistics in guiding investment decisions is concerned, it may be concluded that the value of statistics as a decision support is dependent on the users' ability in further data-mining and the analysis of the published data.

Unfortunately, it seems, as succinctly pointed out by Andrew Lang, the general tendency of the industry is to “use statistics as a drunken man uses a lamp post – for support rather than for illumination”.

As far as the relationship between new building and second hand (10-years old) values of Capesize vessels operating in the dry bulk sector is concerned, as observed in the earlier analysis of the container market segment, they are also in conformity with the basic theory on shipping freight volatility and subsequent shipping cycles. The strong correlation between new building prices and the prices of second hand vessels is also replicated in the case of Capesize vessels in the dry bulk sector.

Nevertheless, compared with the container ships market segment, the correlation between freight rate volatility and the second hand value of Capesize vessels were more strongly correlated as illustrated in figure 15.

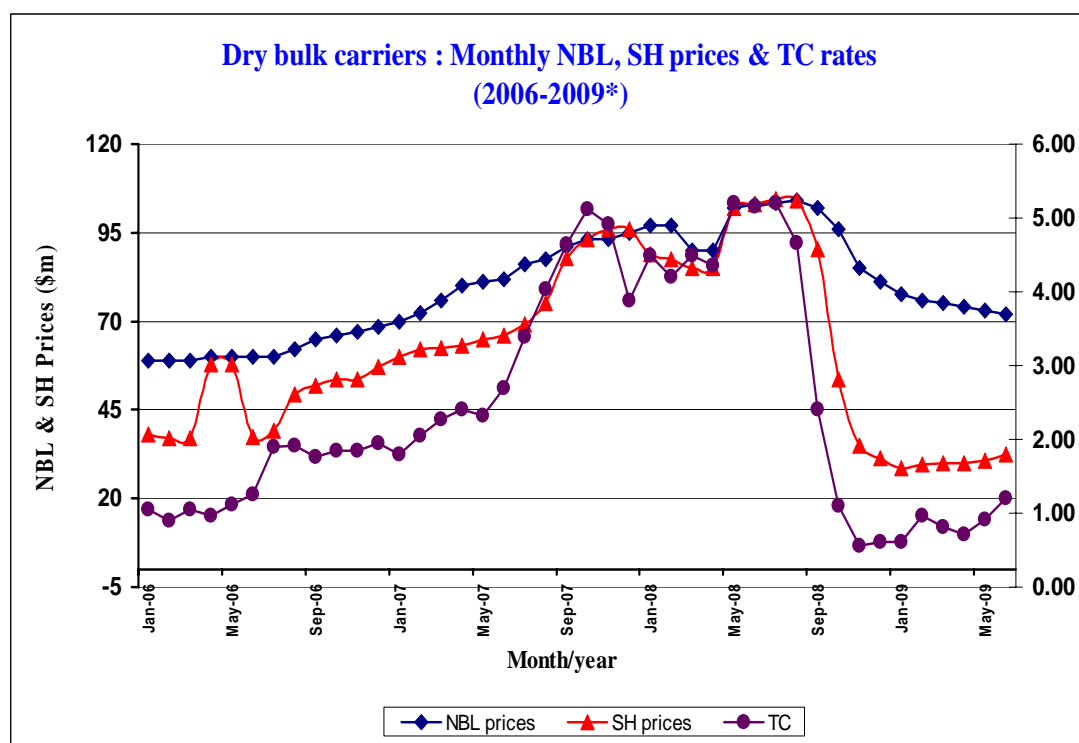


Figure 15: Dry bulk carriers: Monthly average NBL, SH prices & TC rates (2006-2009)

Source: Graphical illustration based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 31 July 2009.

This may be explained by the free market conditions that are exercised in the dry bulk market as compared to the container trade. The use of the BDI in providing the benchmark for daily fixtures on the spot market allows greater flexibility to the market forces of demand and supply to determine the established freight rate, unlike in the liner business.

In parallel, shipping being influenced by factors related to the broader economy, the demand for dry bulk was being driven by the massive demand for iron ore and coal by China in preparation for the Olympics held in August 2008. From figure 15, the “China-effect” is visible as from July 2008 when the country started limiting the production work of its factories in order to control pollution prior to the Olympics of 2008, a decline which continued after the Olympics. The combined effect of the reduction of demand from China for dry bulk cargo and the loss of confidence in the financial markets explains the subsequent steep fall in value of the Capesize vessels, as well as their time charter rates.

For the dry bulk segment, another interesting set of data extracted from the Drewry Shipping Insight was the level of transactions expressed in thousand deadweight tons ('000 dwt) for new buildings, second hand vessels, as well as the demolition of dry bulkers. Undoubtedly, bearing in mind the linkage established between shipping markets and financing investments in the industry, the level of transactions in the new buildings, second hand and demolition markets is a good indicator of the health of the financial market and its likely implications in the shipping industry.

For the sake of consistency, the summary data for the level of transactions is also considered as from 2006, as shown in the table 3.

Table 3: Dry bulk carriers: Annual Transactions ('000 dwt)

Year	Transactions ('000 dwt) – Annual data					
	New orders		SH sales		Demolition	
	<i>Total</i>	<i>% Change</i>	<i>Total</i>	<i>% Change</i>	<i>Total</i>	<i>% Change</i>
2006	35,156	-	37,429	-	1,690	-
2007	134,614	283%	50,266	34%	374	(78)%
2008	78,964	(41)%	24,050	(52)%	4,046	982%

Source: Tabulation based on data published by Drewry

Results from the table in terms of annual percentage (%) changes clearly show the inverse relationship between the level of new orders and in the demolition transactions. The most evident outcome was the change in the level of transactions for demolition, which increased by 982% from 2007 to 2008. This was a very strong indication of the crisis that was affecting the shipping industry by end of the year 2008.

For deeper analysis, a similar month-to-month analysis was made of the transaction level for new orders, second hand sales and demolition from January 2008 to June 2009 as seen in table 4. Data for the second half of 2008 shows an almost 50% decline in new building transactions from July 2008 to August 2008. New building transactions for the same months in 2008 as compared to the results in 2009 have declined quite significantly. In view of the excess tonnage that the industry is presently facing, this is a fairly good signal. Second hand sales seem to have increased. This may be explained by the actual or threatened foreclosures that ship owners with limited cash reserves, face and the relatively young fleet changing hands at relatively low prices in favour of stronger players.

Table 4: Dry bulk carriers: Annual Transactions ('000 dwt)

<i>Month</i>	Transactions ('000 dwt) – Monthly data								
	New orders			SH sales			Demolition		
	<i>2008</i>	<i>2009</i>	<i>% Change</i>	<i>2008</i>	<i>2009</i>	<i>% Change</i>	<i>2008</i>	<i>2009</i>	<i>% Change</i>
Jan	14099	358	(97)%	1523	2520	65%	0	2485	-
Feb	6301	233	(96)%	1169	2898	148%	0	1501	*
Mar	7625	0	(100)%	3269	2833	(13)%	0	1093	*
Apr	5890	0	(100)%	2324	3319	43%	0	851	*
May	11301	1220	(89)%	3407	5805	70%	0	1246	*
June	4804	1600	(67)%	2382	4790	101%	0	269	*
July	10756	**	**	3102	**	**	0	**	**
Aug	6214	**	**	1696	**	**	48	**	**
Sept	5340	**	**	1932	**	**	0	**	**
Oct	4057	**	**	822	**	**	581	**	**
Nov	1814	**	**	1411	**	**	2075	**	**
Dec	764	**	**	1014	**	**	1341	**	**

Source: Tabulation based on data published by Drewry

* denotes undefined as zero is not divisible by any number, except itself

** denotes the second half of year 2009

Given that in the first few months of 2008 the market was still trading at its peak of the shipping cycle, the transaction level for demolition was naught. Nonetheless, in 2009, the change was quite significant, especially in January 2009. This reflects the older vessels which had long surpassed their useful economic lives but were still making good business during the boom phase. As the market crashed, the costs of maintaining those vessels were too high so that demolition was the most reasonable option. It may be deduced in general that the market seems to be self regulating.

However, over the months, instead of increasing, the levels of demolition transactions, as calculated in the last column seem to be almost constantly declining. In the 1990's

even ‘‘good offers from breakers were not sufficient to tempt’’ owners into scrapping their older tonnage (Drewry, 1996, p.29). According to McConville (1999, p.71), this is the consequence of the price of scrap which usually replicates the movement of the freight market. In the present conditions, this may be explained more in terms of the speculation of ship owners in anticipation that the dry bulk market would recover from the crisis sooner rather than later. Yet glancing at the order book for Capesize vessels, it seems that the market might probably take a longer time to recover.

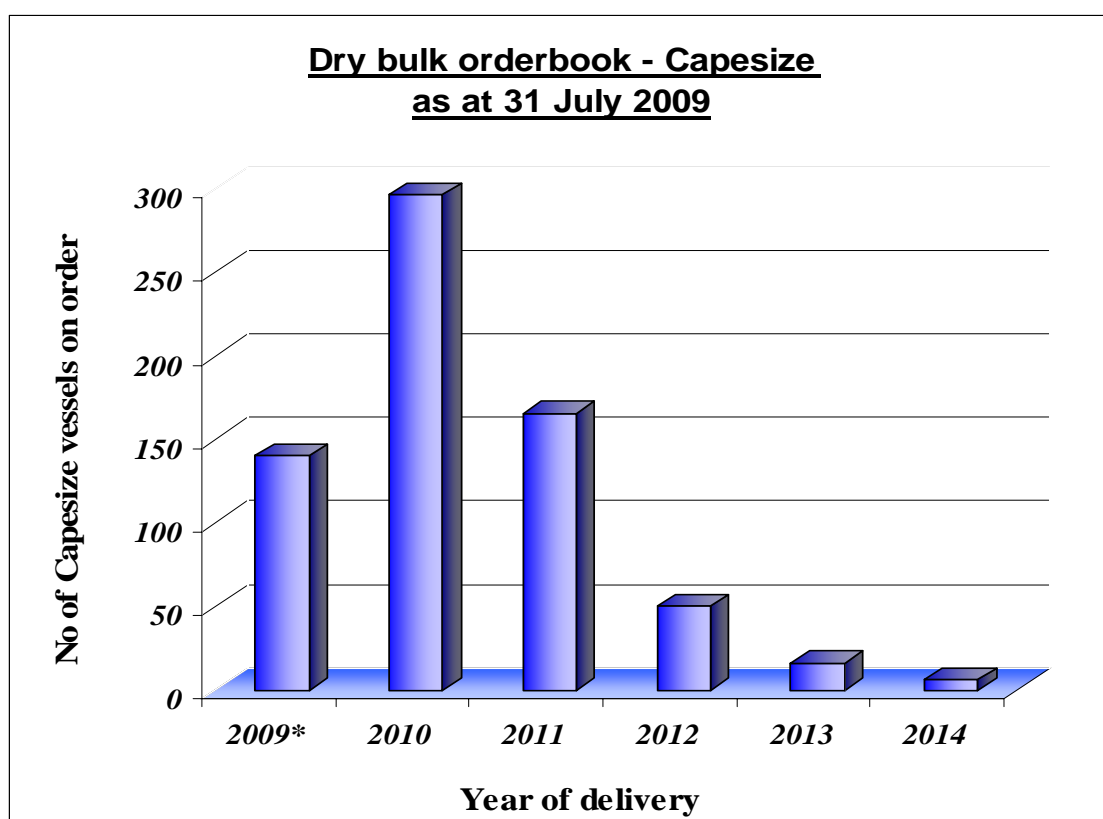


Figure 16: Dry bulk carriers: Order book

Source: Graphical illustration based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

Although 2009 may end on a more positive note than 2008, the influx of new buildings expected in 2010 is most likely to aggravate the dry bulk freight rate volatility for Capesize vessels further, as excess tonnage is expected to increase considerably, unless a significant portion of the 2010 deliveries can be delayed to 2011-12 by renegotiation.

(c) Tanker

As shown in figure 17, as in the containership supply, the South Korean shipyards also have a dominant position in the tanker segment.

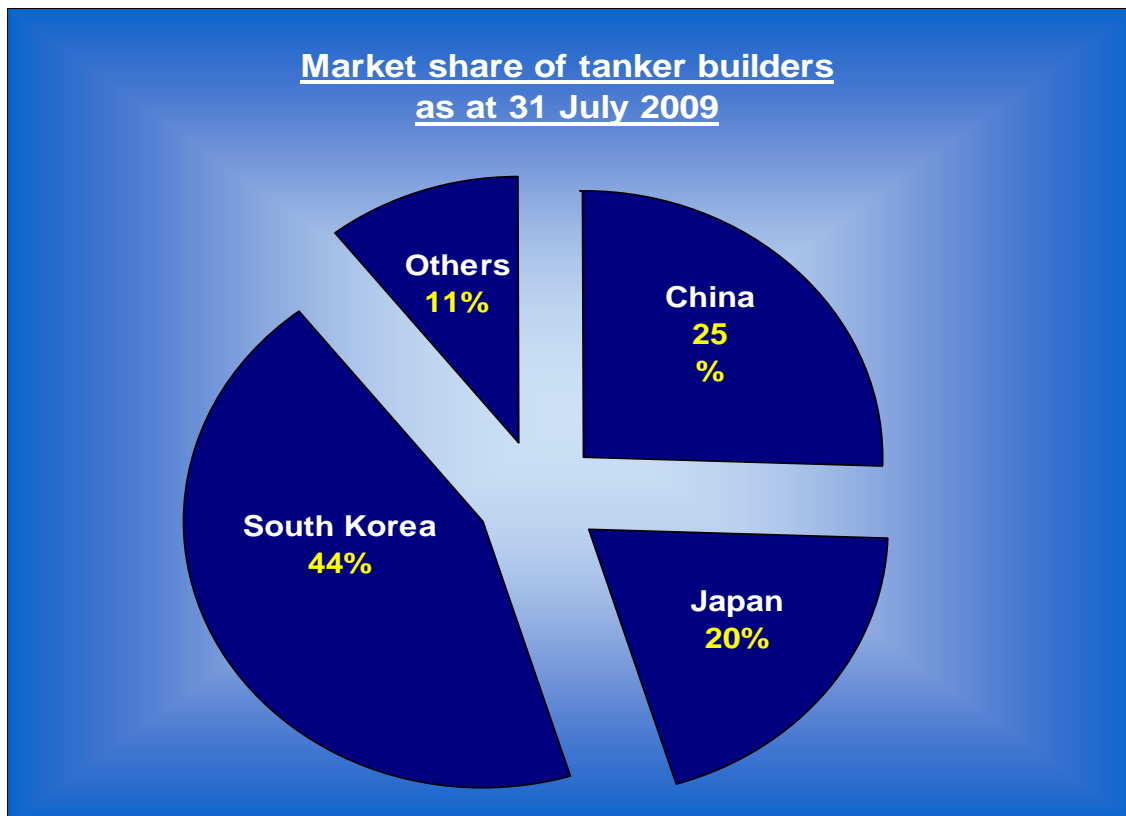


Figure 17: Market share of major tanker builders as at 31 July 2009
Source: Graphical illustration based on data published by Drewry

Figure 18 illustrates the evolution of annual average new buildings and the second hand prices of tankers and time charter rates for the period 1996 to June 2009.

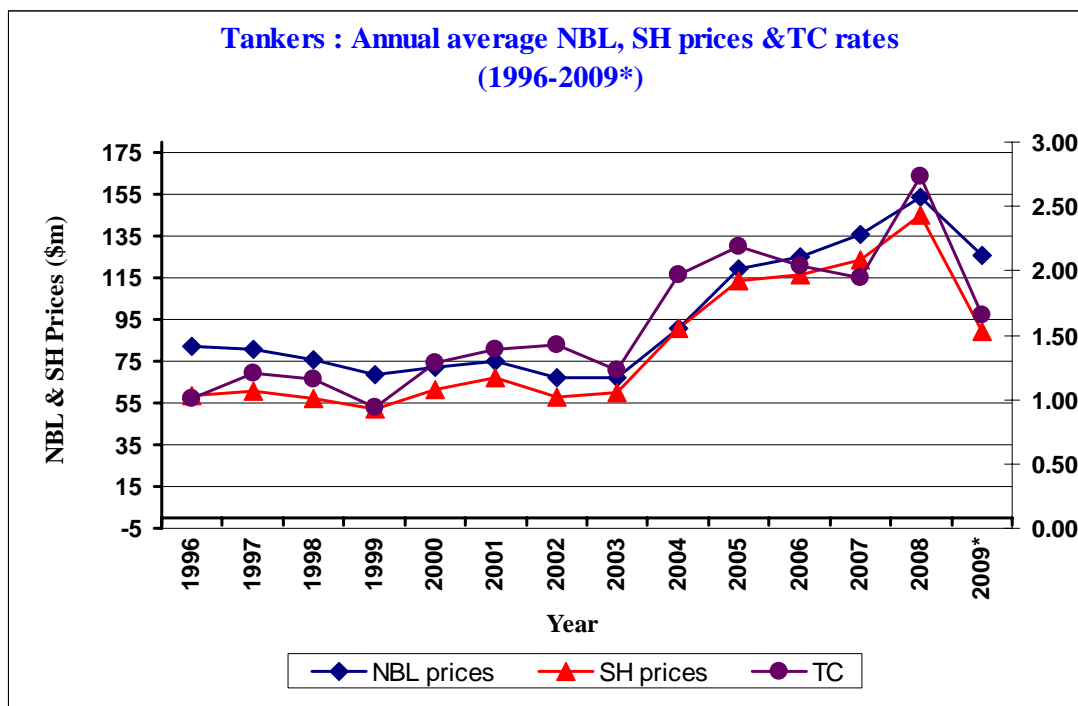


Figure 18 : Annual average evolution of NBL, SH prices & T/C rates

Source: Graphical illustration based on data published by Drewry

The graphical illustration clearly shows the close correlation between the three variables as it did in the containership and dry bulk market segments. Indeed, the correlation between the new building and second hand prices of tankers and between second hand prices of vessels and charter rates are very strong.

In fact, for the tanker segment, whereby the sub segment for VLCC was considered, the correlation between both new building and secondhand prices and that of second hand prices against the time charter rates average, stood out to be highest across all market segments, with $r = 0.95$ and correlation coefficient r^2 amounting to 0.91.

With the phasing out of single hull tankers, the demolition market transactions have been continuously on the high side, the more so in the half yearly period of 2009 as the time for phasing out all single hull tankers becomes imminent. In spite of the combined effect of the financial and shipping crisis which started in 2008, the tanker market segment was in a relatively secure position throughout the year.

It is in 2009 that some surprising results have been projected. For instance, the new building transaction level for the half yearly period 2009 was 0.2% of the total transactions for the year 2008 while the transactions for second hand vessels was reduced by 95% in comparison to the level of transactions negotiated in 2008, as may be observed in the table 5.

Table 5: Tankers: Annual Transactions ('000 dwt)

Transactions (Total '000 dwt)			
Year	New Order	SH Sales	Demolition
2008	55225	28312	3600
2009*	125	1163	270
% Change	(99.8)%	(96)%	(92.5)%

Source: Graphical illustration based on data published by Drewry

Note: (*) denotes that information for year 2009 is up to 30 June 2009.

Although, as shown in figure 19, the investment activities in the tanker market segment have been fairly buoyant over the years, the future stability of the tanker market would be significantly influenced by the expected deliveries of new tankers in the coming years.

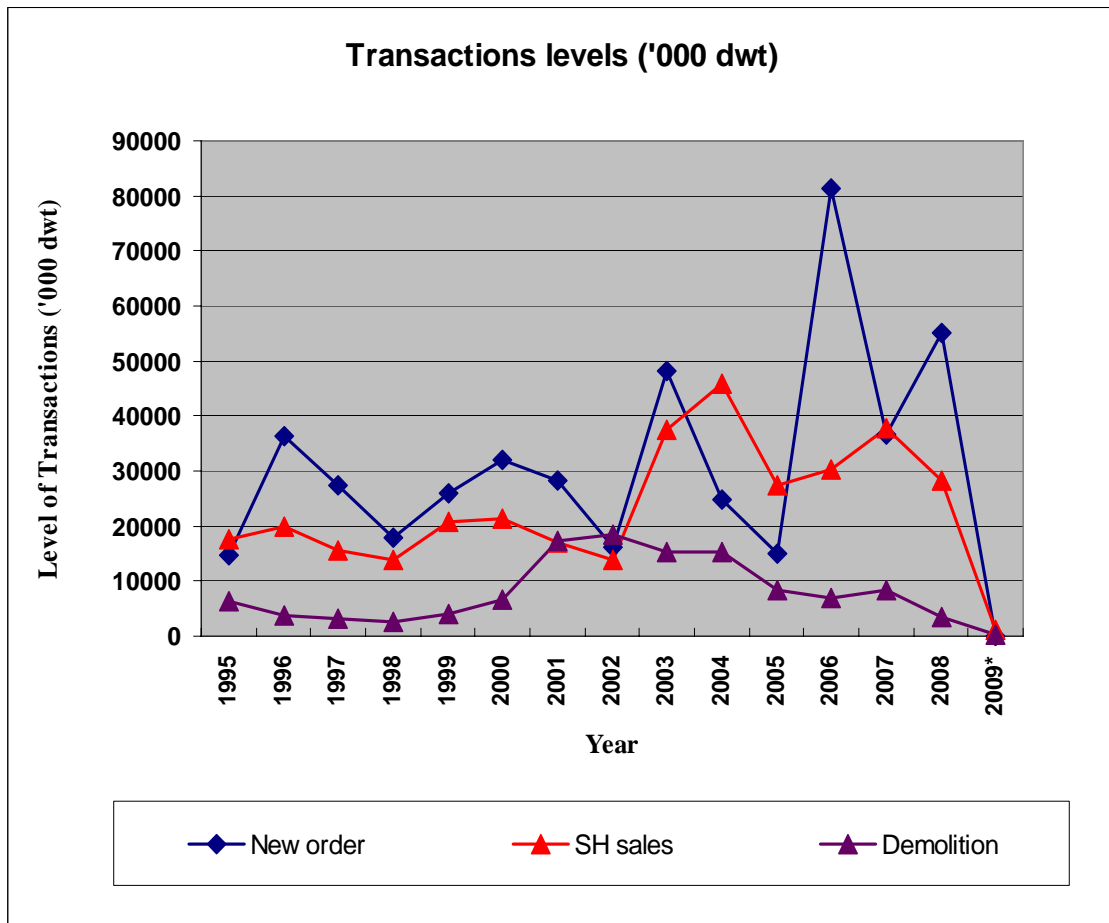


Figure 19: Tankers: NBL, SH and Demolition total transaction levels
 Source: Graphical illustration based on data published by Drewry

Looking at the trend established so far with regards to new building orders, the initial increase in new deliveries as from 2009 to 2011 may be explained by the investment made in double hull tankers to replace the single hull ones being phased out in 2010 and the time lag taken for the building of new ships. This market condition is clearly reflected in figure 20.

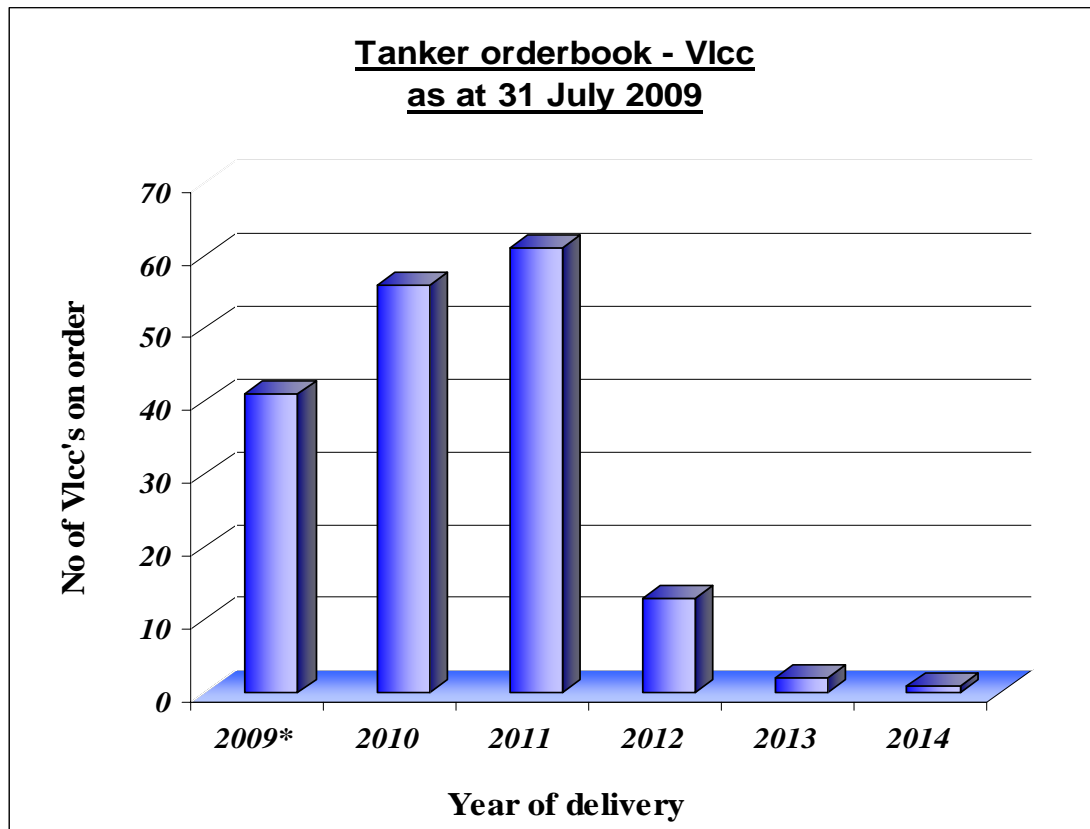


Figure 20: Tanker Order book – VLCC

Source: Graphical illustration based on data published by Drewry

As shown through the changes in the size order book over the years, as from 2012, the growth of the market segment seems more controlled; which emits a positive signal as to the stability of the tanker charter rates in future.

Chapter 5 - Discussions and conclusions

5.1 Discussion

The financial crisis 2008-09 was as unanticipated as was the timing and depth of the shipping crisis. In Shakespearean language “what’s done cannot be undone”. Nonetheless, these disturbances have created a number of challenges as well as opportunities for the shipping industry as in investment in ships, which the industry cannot deny. The industry’s vulnerability to these adverse economic conditions have forced entrepreneurs to take stock of their existing resources, review their management strategies/investment decisions, touch base with the fundamentals of the industry’s key characteristics, including basic management requisites for survival; once again by continuously monitoring their commercial entities’ state of being vis-à-vis their internal as well as external business environment.

As stated by one of the respondents during the survey, conservatism is believed to be the best risk management strategy of any shipping investor. Others believe too much conservatism will dissipate the “fun” of being in the shipping business. These diverging views clearly highlight the differing degree of risk appetite of the respective shipping persons; the former being risk averse while the latter seeming to be more of a risk taker. As a result, the eventual risk management strategies by these individuals will also differ at the corporate level. Yet, the lesson learnt from the present economic downturn for shipping companies is that, irrespective of the way they diversify their investment portfolio to minimise the risks, maintaining a good cash reserve is a must. Although the portfolio theory curtails the possibility of total

loss by spreading risks between assets which are negatively correlated, it did not show the expected promising results during the current crisis as pointed out by Harkey (2009, April), as a result of certain limitations (Buffet, 2009). Evidently, this is possibly one of the main reasons which explain the new trend towards cash flow hedging as one of the main risk management strategies being pursued by companies.

Hedging, an investment instrument borrowed from the financial sector which aims to set the limits of risk, has gained momentum in the shipping industry as freight derivatives. It was conceived to downplay the element of risk and uncertainty which prevails in the industry. As fervently asserted by most shipping practitioners during the survey, it is obvious that no risk management tool is self-sufficient or effective by default. Their effectiveness lies in the way they are used and the extent to which they are understood by their users. A similar argument was rightfully put forward by Gillian Tett, assistant editor of the Financial Times, during her defence of the JP Morgan's pioneering invention in the 1990's in the form of the credit default swap in her publication entitled "Fool's Gold". Hedging, the use of freight derivatives, options and now cash flow hedging are also sophisticated tools used supposedly to control the level of risk. Nevertheless, at times it seems it is only the use of these tools which ends up being uncontrollable or misguided.

In this light, it is believed that the effectiveness of these tools in bringing about the desired results themselves maybe requires some measure of control, possibly through a regulatory body to set certain standards instead of leaving it all to the traditional "gentlemen's agreement" being practised so far. The proposal of having a regulatory body is not to reduce the so-called fun of being in the shipping business, but instead simply to ensure that the players in the industry are cushioned against similar occurrences and not left "in tears" later as asserted by one of the respondents. Therefore, hedging cash flow may be a very promising strategy for the future, provided its users are fully aware of the agreement they are getting into.

Indeed, whether looking at the current crisis or former crises, there have always been winners and losers. Irrespectively, therefore, all crises have an element of bane or

boon in-built. So, in attempting to answer whether the current crisis is a bane or boon for the shipping community, it seems it all depends on which line of the industry the principals are involved in. For instance, while shipping banks and speculators are expected to qualify it as a bane, it is more likely to be seen as a boon by the traditional players of the shipping industry and proponents of environmental ideologies like Siddiqi who had in his study assessed the indirect benefits the Asian Crisis had entailed for environmental issues in the 1990's (Siddiqi, 2000, pp 1-7). Another group who ended up perceiving the current downturn as a boon were the practitioners involved in the crewing aspects of the industry and investors in shipping related infrastructure.

For instance, port infrastructure projects typically have a long lead time, and if there is no "strategic" plan by governments as well as commercial operators to provide facilities for future growth and these projects are simply put on hold due to an economic downturn, then, when the eventual upturn happens, we may return quickly to periods of congestion and hence inefficiency. Similarly, if the result of the global crisis is a surplus of seafarers (or at least removing the shortage) so that investment in recruitment and training will cease as a cost saving measure, it is more likely that the shipping industry will be laying the foundation for the next shipping crisis.

With the crisis that hit the industry, it was the ship owners who had placed orders when the market was on the high side and had secured the required financing from banks who were most vulnerable. With the significant slash in earnings and prospect of secured future charter contracts, debt servicing was a real challenge for them. Shipping banks, which relied on the valuation of brokers, provided prior to the crisis, had to seek new valuations which in the aftermath of the crisis were much more difficult to obtain and required shipping investors to bring in additional collateral security or risk foreclosure. Similarly, valuation in shipping, as in other businesses, is no easy task. This has been vividly portrayed by the experience in the dry bulk sector, which nose-dived overnight leaving shipping investors, ship yards and

shipping banks in a fix. Unlike most assets which depreciate more evenly over their useful economic life until they are written off, in the shipping industry the accounting people have to continuously review their revaluation theories as far as ships are concerned. The next question which crops up is based on what?

Another issue which has generated great concern is the reliability of shipping statistics which are normally updated regularly by the reputed brokering and publication houses. As noted during the statistical data analysis part, statistics published by external sources are compilations of historical facts and review the past market developments. The usefulness of these data is determined by the interest and in-house data analysis and interpretation of the shipping investors. Statistics offer only a snapshot of the general situation of the industry at a given point in time. Their utility as a decision support relies on the resources and experience of the shipping investors in coming up with an appropriate in house tailor-made model to support the investment strategies as there is ``no one size fits all`` model in the industry.

Shifting from corporate policies to national policies, as presented in earlier chapters, the support extended by some governments to their domestic shipyards were condemned by the industry in general. The current crisis is said to be a global problem so that solutions being envisaged should also be for the welfare of all. In reality, in spite of the international nature of shipping, it is felt that international policies may not be as easily implemented. The implications of these policies in terms of socio-economic issues at domestic levels are too high to be disregarded. In fact, doing so may generate another vicious circle of investment with the in-built multiplier effect which is more likely to prolong, rather than cure, the current crisis. Loss of employment implies loss of income, lower income generated implies lower spending which is reflected in lower investment, lower investment will obviously lead to lower demand for shipping services and therefore, adding more to the crisis. On the other hand, government support to the shipyards ensures continued employment and related income-multiplier effects which would restore the stability in the market in the longer run. Instead of looking at the short-term solution, re-

adjusting the focus on the longer-term solution would allow shipping investors to adopt better investment and related risk management strategies for the future.

It is true the shipping business and in particular investment in ships, is risky. Yet, risk has never prevented new players from joining the industry. Over time, globalisation has not only diversified the portfolio of investors, but instead, it has also diversified the breed of investors as well as financing institutions and means of financing. This was all done with a view of managing risk. So, risk management is most certainly in the DNA of shipping practitioners, which keeps being innovated as the industry expands. In the beginning, risk management was the conservatism of traditional ship owners who were mostly private entities, but later changed to being publicly listed companies. Financing institutions were shipping banks, which were over time being challenged by new financiers under the guise of KG schemes and similar institutions. Similarly, means of financing shipping investment started off with private resources, followed by more and more debt financing to the more sophisticated financial instruments, which are now expected to be increasingly dominated by cash flow hedging due to of the financial crisis 2008-09.

5.2. Conclusion

As a concluding note it is recognised that each crisis exposes the vulnerability of existing systems and brings in innovative ways of dealing with the challenges pervading the industry as it evolves. Whenever crises strike, weaknesses are unveiled and a blame culture scenario is sketched to identify the main causes of the crises. Eventually, as the fittest players survive, new risk management strategies are created to guide investment decisions in ships. Assuming the blow of this global recession has been hard enough to safeguard us against similar occurrences, the effectiveness of these strategies would be indisputable. Unfortunately, based on the long history of crises in the shipping industry, it is clear that in general, humans by nature have a decreasing memory of the past. As such the same mistakes are most likely to be repeated and similar crises may follow. It is a merry-go-round which may never end.

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Appendices

Appendix 1 Questionnaire

**World Maritime University**
Dissertation Survey

Web Site

Survey

Survey Monday, August 17, 2009 Shrikant Logout

Opening Note

Thank you for participating in my dissertation survey.

Please complete and submit the survey by 15 July 2009. The survey is being conducted for research purpose only.

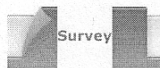
The information obtained will be used to explore ways of improving existing investment practices in shipping and highlight the need for risk management, especially in the event of similar occurrences as the current crisis. Your responses are completely confidential. They will not be associated with your name in any way.

This survey is being administered by World Maritime University.

If you have any question about this survey, need assistance or wish to share any additional input, please email s09053@wmu.se

Sincerely

Meenaksi Bhirugnath



Survey

Opening Note

Dissertation Survey

*** 1. How long have you been involved in the shipping industry?**

- ☐ a. < 1 year
- ☐ b. 1-5 years
- ☐ c. 5-10 years
- ☐ d. >10 years

*** 2. Which shipping market/s are you involved in?**

- ☐ a. newbuilding market
- ☐ b. sale & purchase market (second hand vessels)
- ☐ c. demolition market
- ☐ d. any other/s (please specify below)

Please specify d.

*** 3. Which shipping market segment/s are you involved in?**

- ☐ a. tanker
- ☐ b. dry bulk
- ☐ c. liner
- ☐ d. any other/s (please specify below)

Please specify d.

* 4. Which are your main trading shipping route/s?

- ☐ a. Asia-Europe
- ☐ b. Far-East
- ☐ c. Trans-Atlantic
- ☐ d. Trans-Pacific
- ☐ e. any other/s (please specify below)

Please specify e.

* 5. Which financing option/s are most common in financing your / your company's investment in ships?

- ☐ a. cash payment
- ☐ b. loan financing
- ☐ c. equity financing (shareholding)
- ☐ d. leasing
- ☐ e. any other (please specify below)

Please specify e.

* 6. Referring to former crises, have you/your company been affected by its resulting impact/s?

- ☐ a. yes
- ☐ b. no

* 7. According to your experience, which of the two crises (listed below) are more critical to the shipping industry's performance?

- ☐ a. Financial crisis (financial institutions' operational failures)
- ☐ b. Shipping crisis (freight rate volatility related crisis)

* 8. According to your experience, to what extent is the current global crisis a ``bane`` (problem) to the shipping industry in general?

- ☐ a. very much
- ☐ b. somewhat
- ☐ c. not much
- ☐ d. not at all

* 9. According to your experience, to what extent is the current global crisis a ``boon`` (blessing) to the shipping industry in general?

- ☐ a. very much
- ☐ b. somewhat
- ☐ c. not much
- ☐ d. not at all

* 10. According to your experience in the shipping industry, which shipping market tends to be most vulnerable to financial crisis (i.e. c

- ☐ a. newbuilding market
- ☐ b. sale & purchase market (second hand vessels)
- ☐ c. demolition market

* 11. According to your experience in the shipping industry, which shipping market segment tends to be most vulnerable to financial cr

- ☐ a. tanker
- ☐ b. dry bulk
- ☐ c. liner

* 12. According to your experience in the shipping industry, which shipping market tends to be most vulnerable to shipping crisis (i.e. c

- ☐ a. newbuilding market
 - ☐ b. sale & purchase market (second hand vessels)
 - ☐ c. demolition market
-

* 13. According to your experience in the shipping industry, which shipping market segment tends to be most vulnerable to shipping crises?

- ☐ a. tanker
 - ☐ b. dry bulk
 - ☐ c. liner
-

* 14. Some shipping experts believe that the current global crisis is part of the typical shipping cycle, while others believe that it is not. Do you agree?

- ☐ a. yes
 - ☐ b. no
-

* 15. According to your observation, which shipping market segment seemed to have been reactive in its reaction to the current crisis?

- ☐ a. tanker
 - ☐ b. dry bulk
 - ☐ c. liner
-

* 16. According to your observation, which shipping market segment seemed to have been proactive in its reaction to the current crisis?

- ☐ a. tanker
 - ☐ b. dry bulk
 - ☐ c. liner
-

* 17. Drewry, Clarkson, Fearnley and Simpson Spence & Young Shipbrokers (SSYs) publications are known as reputed sources of useful shipping statistics in influencing management's investment decisions in ships?

- ☐ a. very much
 - ☐ b. somewhat
 - ☐ c. not much
 - ☐ d. not at all
-

* 18. It is often quoted that ``when the U.S stock market sneezes, the world economy catches cold!`` Based on your experience in the shipping industry?

- ☐ a. very much
- ☐ b. somewhat
- ☐ c. not much
- ☐ d. not at all

* 19. `` the Dow Jones U.S Index is a broad-based but investable measure of the U.S. stock market, intended for use as the benchmark event=showTotalMarket). According to your experience in the shipping industry, how far is this index used as a benchmark in the shipping industry?

- ☐ a. very much
- ☐ b. somewhat
- ☐ c. not much
- ☐ d. not at all

* 20. As a shipping person, what does the term ``hedging`` mean to you?

* 21. As a shipping person, what does the term ``freight derivatives`` mean to you?

* 22. In light of the present global crisis, assuming the likelihood of its re-occurrence be high, based on your knowledge and experience, what measures, if any, will be effective in safeguarding the shipping industry against its subsequent shocks?

* 23. Based on your experience, what are the lessons the shipping industry should learn after the initial shocks of the present crisis?

* 24. Any other feedback, comment or views you wish to share on the subject, please.

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Appendix 2 Questionnaire results - Answers to open-ended questions 20-24

Answers to open-ended question 20

20. As a shipping person, what does the term ``hedging`` mean to you?	
1	attempting to <u>limit current risk/exposure</u>
2	<u>reduce volatility</u> of cash flows
3	the ability to <u>offset risk</u>
4	I am not very familiar with this term
5	<u>Diversify</u>
6	Not much
7	Take a chance
8	<u>shielding oneself from risks</u>
9	?
10	Its means " linking a function with another to be better able to determine how the original function changes as the variables do change.",These are the variable whose <u>degree of change</u> determine how much freight can change <u>with time</u> ."
11	The best way to understand hedging is to think of it as insurance. When people decide to hedge, they are insuring themselves <u>against a negative event</u> . This <u>doesn't prevent a negative event from happening</u> , but if it does happen and you're properly hedged, the <u>impact of the event is reduced</u> . So, hedging occurs almost everywhere not just in shipping, and we see it everyday. For example, if you buy house insurance, you are hedging yourself against fires, break-ins or other unforeseen disasters, or say you decide to build a double hull tanker back then when it was yet to come to force by legislation, you are hedging continued business especially with the oil majors.
12	No comment
13	<u>To protect</u> your cash investments <u>from</u> currency <u>fluctuations</u> .
14	Do not use it
15	Analysing and <u>accommodating</u> business <u>risks</u>

16	<u>TRANSFER OF RISK IN A BUYING - SELLING TRANSACTION.</u>
17	<u>Guarding against volatility</u> in freight or commodity price fluctuation.
18	Hedging is contract <u>to maintain</u> freight <u>for certain period.</u> See FFA on dry bulk = Forward Freight Agreement: it is a position taken on the state of the dry bulk timecharter market at specified future date
19	It is kind of risk <u>aversion</u> by insuring in advance against a negative event.
20	Putting measures in place with the anticipation for any future decline in the shipping business, so that these measures could help boost back the downturn. In shipping this could be in the form of funds, sales of old vessels, order of new vessels and host of others.
21	<u>providing more than one risk support</u> such as insurance <u>to cover losses</u>
22	not applicable to my work
23	not sure have been out of the shipping profession for a while
24	technique designed <u>to reduce risk</u>
25	no knowledge about it
26	GBP to US dollar hedging, fuel hedging
27	It's a tool for <u>mitigating risks arising out of market volatility.</u>
28	Innovation
29	<u>offsetting risk</u>
30	It means securing future shipping service or freight at current price or level.
31	covering all bases
32	It is an investment made <u>to reduce the risk of adverse movements of the shipping market</u> by taking the opposite position of the initial exposure
33	speculate price movement (freight) and take proactive action to avoid/limit loss
34	<u>minimising risk</u>
35	finance tool
36	securing a future position by a financial instrument
37	no comment

38	<u>spread risk</u>
39	means <u>managing your risk, mitigating interest/freight rate risk</u>
40	means that ship business inherently incurs risks
41	<u>protection</u> against volatility of markets <u>by transferring risk</u> to other venturers
42	insurance in commercial transactions, offsetting of operations of the physical market
43	<u>investing in FFA's, swaps, options</u> in order to cover your physical exposure in the market
44	<u>risk mitigation</u> - not all eggs in one basket
45	<u>covering potential losses</u> by buying into the <u>futures market</u>

Answers to open-ended question 21

21. As a shipping person, what does the term ``freight derivatives`` mean to you?	
1	a 'paper' market which allows users to try and hedge their physical positions
2	secure forward starting charter rates
3	a financial tool used either to hedge or to speculate on the future movement of freight markets
4	Freight derivatives as projected by Baltic Index and others would help in developing understanding on how the freight market is behaving.
5	N/A
6	Not much
7	The fluctuation of freight rates.
8	freight elements
9	?
10	The industry should use a proactive strategy of risk management which entails a holistic approach towards managing risk.

11	<p>A freight derivative is a financial contract between two parties, which sets an agreed future price for carrying commodities at sea. The contract does not involve any actual freight or any actual ships. It is purely a financial agreement. Given the current volatility of the freight markets, managing freight market risk is a significant issue for the shipping industry. One method of managing this risk is through the purchase and sale of forward freight agreements (â€œFFAsâ€).</p> <p>FFAs are for me also Freight derivatives. Derivatives are risk management tools, the value of which is derived from the value of an underlying asset. In the shipping industry, the underlying asset is the freight rate for a specific physical trade route which receives a daily assessment on say the Baltic Exchange. Two types of FFA's I know are Swaps" and "over the counter" trades which am sure you are also familiar with."</p>
12	no comment
13	Factors in product supply-demand that influence freight.
14	Do not use it
15	Not used
16	AGREEMENT BETWEEN TO PARTIES THAT DETERMINE A FUTURE FREIGHT RATE TO BE USED ON A SPECIFIC SHIPMENT.
17	Advance prediction of freight
18	used either as a hedge or for speculation"
19	Financial instrument for future trading of freight rates for large cargo through bulk carriers or tankers etc and the future freight rates are published in Baltic Exchange. Frieght derivates is also kind of advance insurance against negative shipping market
20	Comparing the spot rate with previous market rates.
21	Contract or arrangement that determines freight rate for a specified period.
22	not applicable to my work
23	not sure either
24	financial instrument for trading in future levels of freight rates
25	no knowledge about it
26	na

27	Freight derivative is a tool for hedging the risks from volatile freight markets. However, it can work in the very short term and is not very valuable in very high volatile market situations such as the current one. Additionally, speculators have entered the freight derivatives market thereby making it rather meaningless.
28	to offset risk
29	a means of offsetting risk
30	charges associated with freight
31	not much
32	They are financial products derived from the underlying freight market that are used to hedge or speculate
33	A tool for hedging
34	instrument to secure earnings for future
35	financial instrument include FFA
36	an instrument which can be used to hedge against freight fluctuations
37	no comment
38	limit fluctuation
39	if used correctly, it is valuable financial tool
40	risk management as a buyer/as a seller, gamble
41	no comment
42	futures, options, freight financial products used for freight hedging operations e.g. futures (FFA market on the Baltic Exchange, IMAREX)
43	investing in FFA's, swaps, options in order to cover your physical exposure in the market
44	paper hedging "instrument" to mitigate chartering ups + downs
45	Freight rates fixed for "delivery" in future markets

Answers to open-ended question 22

22. In light of the present global crisis, assuming the likelihood of its re-occurrence be high, based on your knowledge and experience of the shipping industry, what kind of risk management strategies do you believe, will be effective in safeguarding the shipping industry against its subsequent shocks?	
1	Shipping relies on the most basic laws of global supply and demand so it is quite difficult to put truly effective risk management in place. Risk allows for profit to be maximised but at same time can also leave Owners open to loss if they misjudge the market.
2	Increase equity and general strengthening of balance sheet, i.e. lock in longer-term financing.
3	The present (and future) global crises are based on greed and an inability to learn/remember the lessons of history. Risk management strategies can only mitigate these basic human failings but not eliminate them.
4	In depth study on type ships in a particular sector including on order before making any commitments and taking on long term charters
5	Supply and demand of tonnage.
6	No.
7	Very low risk
8	to plan well the needed tonnage in the industry
9	Cost control / cost avoidance
10	The industry should learn to depend more on the economics statistics of the world and if investing it should expect the returns after a much longer period than it has always been.
11	As you also indicated, hedging is one and use of freight derivatives. Old fashionly, I would still go for pro-active compliance to legislation and to what the customer" or charterer requires protecting the company especially in the tanker industry. "
12	<ul style="list-style-type: none"> - Keep up the fleet in a good shape, complied with Rules and Regulations, ready to be operated - Focus on training to personnel and retaining them as a long term investment
13	Modest cash investments (2nd hand market 07-11 years old), pooling of ship deployment and discarding overage tonnage.

14	It depends of the duration of the crisis. However, you will need to look at marketing strategies, competitors, rates, deb financing (if) or alternative options, credit risk assessment, and possible gather with other members of the shipping industry to draw strategies as well.
15	Less virtual economics, more real transactions.
16	SLOWER GROWTH RATE, FOCUS ON PROFITABILITY RATHER THAN MARKET SHARE.
17	To be present in all shipping segments i.e to say liner, tanker, bulk carrier, LNG, LPG, Chemical etc. and also distributing ships into long term and short term charters at the same time.
18	
19	I cant give any answer as I do not keep track of the shipping market and the risk managment
20	I believe in contingency planning, what ever situation we have at that time, even during booms and negative booms because what ever the case there will be some downturn but what matters is how you manage it with the resources available.
21	strategic planning in selection of markets, rates and determine the effective hedges to contain shocks in the industry
22	producing quality and serious seafarers taking advantage of the crisis
23	Perseverance
24	Companies should reduce the volume of newbuildings so as to reduce the global supply in ships and increase the freight prices in the future.
25	no knowledge about it
26	strict cost control
27	Must secure certain amount of freight i.e. 60-70% through long term contracts and hedge only a small percentage through the spot trade.
28	Buy tonnage, With fuel efficiency, new technology in order to sale freight cheaper and establishing a win to win business with the owners of cargo and establish a more person to person attention to their clients.
29	I do not agree that the likelihood of its re-occurrence is high however each company is individual and they will all make different judgments about the market; some will be right and others wrong - that seems unlikely to change - ever.
30	proactive and forecast based risk management strategy

31	diversify-operate different types of ships and services
32	Fix vessels with long term, period charter with first class charterers, reduce leverage, increase capitalization, avoid long chain of sub charterers
33	optimal fleet size (tonnage) & keeping strong reserve; balance fleet(type & class) & limit exposure to speculation
34	risk management analysts
35	As banker, we are more strict in giving loan
36	Balancing fixed term and long term charters. Sufficient liquidity coupled with secured funding for long term commitments
37	no comment
38	hedging on cash flows
39	Shipyards are too subject to too much political issues -different drivers with different agenda; banks are not regulators of the industry, they are answerable not to the industry but to their shareholders. They are committed to make money and make money sensibly!
40	to maintain "good friends", "good customers", "good partners" shipping is really volatile "please review what YOU & bank did in past 3-4 years" - review of decision making
41	diversification into other sectors, e.g. service, offshore etc
42	no comment
43	investing in FFA's, swaps, options in order to cover your physical exposure in the market but more liquidity needed; better forecasting esp. in macroeconomic factors
44	a similar crisis may be protected from but there will be no protection from different crises
45	<u>FFA's and investing in ships</u>

Answers to open-ended question 23

23. Based on your experience, what are the lessons the shipping industry should learn after the initial shocks of the present global crisis?	
1	we have seen similar problems previously when euphoria colours vision and high prices accompanied by high freight rates encourage too much speculative investment which leads to over supply. When this is combined with the collapse of the financial markets and credit lines are halted it can only have one result. Unfortunately the adage 'history repeats itself but we never learn from history' seems to apply all too obviously
2	Same as after previous shipping crisis. The order book has grown to big, too optimistic forecasts about future demand and charter rates.
3	<u>People should look at long-term historical trends and not short-term market spikes.</u> this should hold people back from over-ordering tonnage, paying unsustainably high prices or over-extending debt commitments
4	We need to develop better growth and development strategies so that the expansion in shipping is in phase with the growth in trade
5	To keep a closer eye on the global practice of credit loans and <u>the value of cash reserves.</u>
6	None
7	Try to have a better view of the needs of the customers, how much cargo that has to be transported around the world.
8	shipping industry is heavily dependent on global trade
9	Not to invest too heavily during major high periods - the cyclic nature of the industry needs to be accommodated in planning for the future.
10	This questionnaire should not only be directed to Shipping Experts but also to Financial Analysts. <u>The Econometrists of our times did not use the right variables so they could not estimate the extend to which the world economy can be affected by the financial crisis</u>
11	<u>Nothing beats being prepared. Doing your risk assessment and continually reviewing AND responding positively to what you yourself have risks assessed helps to ward off any (bad) surprises coming out of the business cycle.</u>
12	no comment

13	Astute Risk Management Policies
14	no comment
15	Any business is volatile, shipping even more. Be prepared for internal competition; but also, pray that external factors do not coincide with your lean times.
16	<u>NOT TO OVER EXTEND THEMSELVES.</u>
17	To be present in all shipping segments and also distribute risks into short term and long term charters.
18	no comment
19	After a storm there is a lull, <u>utilize the energy to capitalize on the lull otherwise the markets will keep thinking that there is going to be another storm.</u>
20	The world economy has many derivatives and these should be constantly monitored, since we know shipping is a derived demand" any change in one sector of the economy be it fuel prices or production of raw materials or changes in the price of the finish goods
21	Think and act strategically to contain the shocks.
22	Should have predicted such crisis on the basis of past experiences and to be ready for taking initial shocks.
23	diversification
24	Persistent booming in freight rates is followed by a sharp reduction
25	no knowledge about it
26	to be always aware of cost control even during the good times
27	To resist from the heard mentality of acquiring tonnages profusely and focus only on niche newer markets. Also to try to secure a significant part of the tonnages in long-term steady cash flows.
28	<u>The business has to be more alert to the economic indicators</u> Such as combustible, iron and technology prices and it has to tray to establish a balance between demand and freight.
29	to keep looking at the fundamentals
30	To be proactive and should be ready for unexpected downturns.
31	not to get carried away during the boom time so much so that there are tears during crisis time

32	<u>Beware of finance since shipping market through FFAs and public listed company became very sensitive to finance.</u> Also <u>could be of interests to create a system of netting of physical market, prohibit speculation with FFAs</u> that are increasing freight volatility
33	optimal fleet size (tonnage) & keeping strong reserve; balance fleet(type & class) & limit exposure to speculation
34	managing risk & uncertainty
35	<u>If BDI go up very much, we should ask you one question: why?</u> And we should be careful. In this kind of situation, do not hurry for buying new ships
36	<u>The financial markets are much more important today than in the past</u>
37	no comment
38	my understanding is for them, it is more "business as usual"
39	to stick very much to historical rates as there are no perfect solution by virtue of the cyclical nature of the industry's evolution
40	
41	long term contracts, diversification into less volatile sectors
42	<u>Controlling the number of newbuilding ships</u> , transparency of demolition market, new regulation for FFA market at Baltic Exchange
43	Always remember shipping cycles, history repeats itself!
44	very few lessons can be learnt from capitalism
45	not expect good markets to last, plan for "rainy day", save \$\$ in good times

Answers to open-ended question 24

24. Any other feedback, comment or views you wish to share on the subject, please.	
1	This is the first downturn in which the money market collapsed at same time as commodity prices and global freight rates and so no alternative avenue was avlbl which offered any respite from the effects of worldwide recession. Presently it is safe to say that 'cash is king' and so owners can expect to try and take advantage of other Owners or institutions which find themselves under pressure.
2	---
3	no
4	Shipping is cyclic and this happens every few years.
5	Although the credit crunch has eased the demand for ship officers, without proper planning the problem will return as the markets pick up. Also, there is evidence that training budgets have been cut, and this will have an adverse affect if not addressed.
6	None
7	Would be good to have a no opinion - don't know" option in the questions. "
8	The shipping industry, especially container shipping is really hit than ever before
9	No
10	---
11	You need to also consider Safety, Environmental protection and Health compliance issues as well as Integrity and good business reputation as just as important as the financial strategies you adopt in this business.
12	To be viable, a shipping company should consider of the following: - safety compliance - training - good leader with long term vision/strategy
13	Good old fashioned Greek Philosophies: 1- Let the ship earn to fund the fleet, one X one. 2- Constantly innovate to keep operational costs low, 3- Separate operational costs for that of safety.

	It will be important to assess the general world economy situation at beginning of 2010 and also shipping sector lost.
14	Many small companies will need to close down. Meanwhile other companies are laying up more ships and loosing profit. The big shipping companies will reduce rates in order to struggle filling the containers and gather the clients of the small companies that did not survive.
15	Wish you success with the Dissertation
16	NO
17	Will be happy to clarify any doubts, if I can. Thank You.
18	---
19	Nothing, All the best, Sorry I could not comment much about it Regards
20	Or maybe natural causes as we know will affect the shipping business. Whether we like it or not."
21	Care ought to be taken in assessing the impact of the global financial crisis on the shipping industry as the full results cannot be ascertain at this stage.
22	no. wish you best of luck
23	none
24	no
25	no
26	a lot of ship owners started to benchmark their costs and cost control is widely introduced through in ship man companies
27	Shipping industry continues to be guided by so called experts and do not rely on their respective exposures with their direct customers. There is a need for focusing on the customers and building long term relationships rather than drawing blood at short term opportunities. Shipping is immediately affected by world trade and various movers in the world trade; hence it should hedge its risks on study of various world trade indicators. It should also consider in vertical integration by getting stakes in mines, oil fields etc to secure cargoes.
28	Good luck with your research

29	This survey completely ignores the influential role of the broker and it would have been useful to gather data on that. Also your questions do not allow for the not applicable" answer as in Q5 above; we do not invest in ships as we are brokers. "
30	It is an interesting research. Hope it will contribute to the knowledge on the industry.
31	Diversification has proved the best for our company at least. While some types of ships lost, other types made up part of the losses
32	---
33	---
34	Shipping is international,...with globalization any crisis in this industry will have worldwide repercussions, as such it a must for all to be duly concerns with issues relating to this industry!
35	---
36	---
37	---
38	---
39	---
40	It would be interesting to understand what banks think about what they did
41	---
42	Uneven number of the fleet in certain segments, control after ship-building industry(there should be more stringent regulation on loans, credits available from the shipbuilders), no green-field shipyards
43	---
44	---
45	strength of fleet or cargoes could out-ride hiccups, SME's will suffer unless they are flexible and open to change

Appendix 3 Transcript of Interviews

(i) Interview 1

Date: Friday, 12 June 2009

Respondent: John (pseudonym)

Particulars:

Written Questionnaire Answers - 10 minutes

Questionnaire-based interview - 20 minutes approx. (18 minutes 58 seconds)

1 Financial crisis or shipping crisis-which is worse?

Q1: Like, in one of the question I ask about ... which one is worse for the shipping industry, is it the financial ?,... i.e. is it the financial crisis or shipping crisis which is more problematic for the shipping industry or the shipping crisis?... and you chose the shipping crisis. Why did you choose shipping crisis instead of the financial crisis?

Answer: Because the freight volatility is more likely to affect future freight rate or current freight rate than whatever is happening in financial institutions. I think it is more relevant to the shipping market specifically.

Q2: why I am asking this question is.. .because, when I was doing the literature review, they that say it is finance which drives the shipping market?

Respondent: ump,...

Q2 (contd): They believe that if there is more the incentive to borrow money, then there are more people who go to invest in ship...

Answer: You used the word I was going to mention which is investment. If you are looking at the overall shipping investment market, I would certainly say that the financial crisis was more relevant but you mention the shipping market or shipping crisis ... and there is more to shipping than just buying and selling goods, there is more to shipping than just investing in ships,..shipping is mostly carrying cargo on ships, not just buying ships and using ships as commodity ,...that's why I mention...,

if you talk about the new building and sale and purchase market, then I will agree with you - financial crisis, but you talk about the shipping industry in broad that's not just investment in ships

2 Shipping statistics – Usefulness & reliability questioned?

Q3: ...and another thing is,..One of the other question...we have all this up to date statistics coming everyday and of course many shipping companies based their investment decisions on those statistics, but...ump, why is it that still so many companies faced problems during this crisis

Answer: Because they ignored the statistics!... or they did not understand them well! Or they did not create them...

Q 3 (Contd): So...

Answer (contd): you are talking about Drewry and Clarkson I believe...

Q 3 (Contd): yeah, yeah,and...

Answer (contd): It is the people who create those statistics; I believe, they believe – know what they are doing! But people who don't ...perhaps read them for what they are\do not understand them- either ignore them or use them wrongly!

3 Shipping Market Segments

Q 4: and ...For different market segments, like... when the crisis happen, for the dry bulk it was a steep fall down while for the tanker it was quite resistant for a while... and for the container trade it was very static,...how do you explain this situation?

Answer: The dry bulk market was mostly led by the iron ore and coal market, both of which were and still are of great importance to the steel industry and the biggest country for importing iron ore and coal of course is China and China had a very large proportion of the iron ore from the world for the last five years, about one third of the world's iron ore and about a quarter of the world's coal was going to china and with the downturn in need for steel partly, because of the number of ships being built

has reduced; the orders for ships was being reduced there is less need for steel...China could therefore control the world steel market and effectively therefore, world trade by September 07 last year,..Therefore they stop buying iron ore, therefore they stop buying huge volume of coal, or rather they stop buying iron ore at cheap rate from Brazil and they started buying only from Australia and that had a quite knock-on effect

Q4 (Contd): but for the tanker market,...because it is energy that the world,...

Answer(Contd): it is less likely that the liquid energy market will be affected quite as dramatically ...because people are still going to need crude oil, and products such as fuel, diesel and all the others jet oil and all,..so that is less likely to change as dramatically, it has taken a hit but not quite as huge and not quite as sudden as with the dry bulk market which was mostly led or downfall was mostly led by china and regarding iron ore & coal in particular

Q4 (Contd): but for the container trade how do you explain this static reaction,...

Answer (Contd): That is because the majority of the consumer goods carried in containers will still be sold...people are still going to buy clothes and shoes and laptop computers and TV sets and food .Processed goods and so forth, that kind of market or rather the downturn on the overall spending money of the public is that they not going to stop buying everything right away... that is more steady

Q4 (Contd): can we say that the effect on market segment is led economically by economic needs and again it turns to finance issue

Answer (Contd): ump, ya, ya good ...ya, now for example it is a better time to borrow money

Q4 (Contd): because of the low

Answer (Contd): because of the low interest, ya

4 Ship Finance

Q5: and what about...like banks are becoming more strict in lending money to shipping companies, it is not so easy to invest and when low investment it tends to generate negative cycle eventually in the long run

Answer: Then, it could do, I should say I do not know that banks are now reluctant to lend money,...now is a great time for them to lend money at least from an owners' point of view, I grant you from the banks point of view that banks are not earning much interest that is not very good for the bank but I have not heard that the banks are having such a terrible time

Answer (Contd): ...You believe they are?

Q 5(Contd):Yeah,...

Answer(Contd): as regards lending money?

Q 5(Contd):...to the shipping industry especially,...Because of the shipping cycle which is so volatile, when it was at high, so many owners borrowed money to buy ships at this high price and now suddenly they are unable to pay back the money

Answer (Contd): Do you find from what you read ...'foreclosure' ...where ships are being bought back by banks when owners cannot pay,...ump ...and what do bank then do with those ships?

Q 5(Contd): they just sell it again?

Answer (Contd): well some do indeed,...others they might still,...and... Do they sell it?

Q 5(Contd): yeah...

Answer (Contd) : they do?...yeah sometimes they sell,...but most banks will let them be managed by ship management companies and in my experience several of the big ship management companies which is doing lot of work on behalf of banks,...

Q 6: and also many people keep mentioning or keep highlighting that this financial crisis is very different from previous crises, do you also believe that it is different from previous crises we had had?

Answer: It is definitely bigger, more wide-ranging. It is different because it started in a different way and it is likely to last for a fair time but not for as long as was expected last year when we were told that this crisis will last at least until mid 2010 but now we are beginning to see, at least on the freight rate side an upturn ... and we are now in June 2009, ...so yes, it is different in that sense,..ya!

5 Government Interventions

Q 7: And also it is said that in the shipping industry because of the reoccurrences of these cycles, ..We are so used to these cycles, so it is normal, so do we let the market works its way out or should we take measures to make the market become good again?

Answer: what kind of measures?

Q 7(Contd) : like the governments are taking in supporting financial institutions or ship yards by providing credit or...

Answer: Well, if the government can afford to provide credit, that's a big question and they have more than enough to do as it is now... if they can, yes that will be useful,...Otherwise, let the market play with itself and it will resolve its own issues.

Q 7(Contd) : Because the conflicting issue here is that we have this oversupply which we have to take care if to make the market become normal again but if the governments are taking initiative to correct this supposedly market failure by providing more credit to shipyards, so they are still adding to this oversupply,. And not really helping,. Are they?

Answer: Yes, exactly,..On the other hand, they cannot ignore shipyard unemployment which is the biggest – because you cannot simply close down a shipyard, suddenly you have 3,000 people on the street – so you got to keep the

shipyard going. I will come back to what I said before, ..the market should probably correct itself,.. I do not think government interference would be useful; it may be misplaced!

Q 8 : According to you, given the socio-economic effect in the short run, it is ok for government to interfere?

Answer: It might be, depending on how they interfere! If they are interfering for the sake of it to win votes, without thinking through, what is it that they are doing OR how useful their investing would be, I think, that is not very clever,.. there is the need for better dialogue between banks, government and the industry – as I suspect there is not much dialogue that has gone before or directives from high like ‘ ‘ this is what we think you need’ ’, rather than ‘ ‘ what do you need?’ ’

6 Financial crisis & Shipping Crisis – Is it depicting the chicken egg situation?

Q 9: when we had this financial crisis and soon after we had this shipping crisis, a big question was whether it is the financial crisis which led to the shipping crisis or was the shipping crisis already working its way through and it is the financial crisis which was actually the last nail in the coffin, as they say,...

Answer: No, I do not believe it was the last nail in the coffin and that shipping market was going down already,..

On the contrary, the shipping market was going to thrive, especially after the last four years of unexpected huge profits... so the financial crisis affected the overall shipping industry,..At least in the carrying of cargo!

Q 10: But when shipping industry was booming so abnormally in a way, we had so many speculators, e.g. the green shipyards as they are called which came in the market,. So do you not think that in a way this crisis had kind of ‘ ‘clean up’ ’ these practices,..

Answer: clean them out you mean? ummh, ..In that sense that's true but I do not think I will rely on the financial crisis to do your cleaning up...that would be too drastic!

Q 10 (contd): But still the media talk about it, they tend to put much emphasis on the crisis being so,..

Answer: Mostly because the media does not know what they are doing and bad news sell newspapers and television programs and good news tend not to sell newspapers. So, if you have some media, some journalist who are really good and understand from their research, much of which are however headline grabbing and most of them do not know what they are actually doing and therefore what the public see is what the newspaper say and which is not necessarily the book story!

Q 10 (contd): So, in your opinion, if the financial crisis was not to happen, the shipping industry would have continued booming?

Answer: Yes, there was still a huge demand and there is still a huge demand for major commodities and therefore, ships to carry them, which is why shipyards had full order books until 2011!

7 Boon or Bane?

Q 11: So, for you the financial crisis is nothing to the shipping industry..not a boon neither a bane?

Answer: I would not say `` nothing`` ,...Just that it is not the driving force.

Q 11 (contd): So, for you, it is not affecting shipping in a very significant way not like,..

Answer: Yeah, not like in the case of housing, for instance,...because some people are still going to need cargo that are regular 95 % of everything that we wear, that we sit in, that we sit on, that we sit under,..that we use, are carried by sea - and that's not going to stop- it may not be as before but it is not going to stop!!!

8 Globalisation & IT

Q 12: Also one of the questions that arose was... When the previous crises e.g. in the 1990's in the eastern part of the world,... because globalisation was not so widespread at that time, the effect was not as global as it is this time and moreover we also had IT which was not so very accessible to all- but today, with the information power that is around, why is it that the info was not pass on as quickly so that these bad repercussions which happened could have been prevented,.. In your opinion?

Answer: umh, I think it was pass on very quickly in the world as compared to the early 1990's and I would say that people did react as quickly, ..I would say the more so than in the more ignorant days of the 15-18 years ago. I am not sure, I quite agree with your question,... In fact they are plenty of players who were able to react quite quickly because of the speed of information transfer!

9 Risk management strategies

Q 13: And what about risk management strategies that shipping companies adopt or already have adopted? Do you think it is a common practice in shipping companies to have such formal risk management strategies?

Answer: Yes, yes, ..Especially the larger players do

Q 13 (contd): And is it a formal kind of risk management strategy?

Answer: Usually, yes, the larger players do,.. You know what they do with respect to investment activities, for instance,--they consult banks, buy expertise; quite big business on the employment market especially

Environmental issues v/s Oversupply?

Q 14: And for the scrapping market? What about the situation following the financial crisis...it was zero sometime back, because of the booming market and now suddenly it is full- and still we have all these environmental regulations – so that this problem of oversupply remain more or less stagnant.

Answer: Do not forget now,..We have to write down a number of ships – especially tankers by next year all the single hull tankers would all be completely scrapped – those e.g. that will not be converted into carrying dry bulk cargo, those single hull tanker will be scrapped and that will have certain influence on the wet market supply

10 Any other input, comments or suggestions:

Q15: Any other input, comments or suggestions:

Answer: politics should play a lesser role and /or if play a role, it should be with serious consultation with the industry rather than dictating – i.e. communicate more!

Q15 (contd): So you think, politics should be away from shipping except if they are in good consultation with key stakeholders,..Then what about International Institutions like IMO; ICS,..What about their role? Should they interfere or not?

Answer: I think they should interfere when it comes to crisis of their magnitude. The IMO mostly concerned with safety and technical aspects. ICS, ICS, Intertanko, Intercargo, Baltic exchange, BIMCO,..All these major institutions are involved in looking at the larger overview of the market

Q15 (contd): So this is something that the market need as a regulatory framework you mean?

Answer: yes, absolutely,. I would say so. Otherwise shipping people would be wondering where the next need is, where the next suggested move is. So, yes, they look to these institutions.

Q': Thank you

(ii) Interview 2

Date: Monday 29 June 2009

Respondent: Mr Job

Particulars:

Written Questionnaire answers - 10 minutes

Questionnaire based interview - 26 minutes approx.

1. Shipping & crises

Q1: Based on your experience, what do you think about crises & shipping (in general), suppose we do not consider the present one?

Answer: previous crises?..am too young one for this ;)?...so,uumh, I have no first hand experience but I heard from people that have experiences that they were not as bad as they turned out now,...especially because they were crises pushed by the shipping industry and not financial institutes, i.e. banks were in good state but it was fundamentally demand for especially tanker that fell apart; leaving many ship owners exposed, ...ships are normally needed

Q2: Suppose we talk about shipping cycles and business cycles in general? What do you think about the relationship between shipping cycles and business cycles in general? Is there any connection?

Answer: Is there any correlation between shipping cycles and business cycles you mean ... I think it depends on the market. I think shipping always lags behind. The thing ...I would say that they lag behind the shipping cycle. So I guess the one that reacts most to finance, for instance, the business cycles, for instance new demand increase which might happen in one year or two years time is going to be in the Liner sector and bulk carriers may be...they are not that much correlated, or that they are correlated to the lag in business cycles so shipping always need to react to the broader economics.

2. Shipping Market Segments

Q3: When you speak about shipping market segments? How do you explain the differences in reactions between the different market segments? Like for instance in

current crisis the sudden crash of the dry bulk rates, the tanker charter rates being quite stable,...

Answer: Bulk carriers was primarily based on China's tremendous demand for raw materials and in connection with freight derivatives, especially, FFA's in the capsize sector - rates went up to US 20,000 dollars/day. So, I think, the demand by China and the hope that people put into the demand of China that it will continue to grow for certain period of which led to those tremendous increase in freight rates and time charter rates and containers was equally based on China,... I think shipping in general, with maybe the exception of the tanker market was very much based on China and the demand the China was hoped to generate, which I think was one of the stupid idea, was what led to those too high rates!

Tanker, I would say, tanker did not touch high level, they were quite stable and as you can see they the last to be affected by the crisis. Maybe it is poor argument but again, it may be explained in terms of container and dry bulk markets based on China and ships traded.

3. Ship finance

Q4: And according to you, how does it affect investment in vessels in those segments now?

Answer: now? ...From owners' perspective, if you are newcomer in the business, you are more or less incapable/ or not able to tap the bank loan market at all! I think only if you have good banking relationship or you have done lots of deal with your house bank if they have faith in you and if you can pay those rates, loans may be sanctioned based on percentage on top of the LIBOR, but if you are a new company, for example in dry bulk, say, you might rather consider generating equity or use junk bonds to raise finance!

If you look at the KG scheme in Germany at dry bulk and container market,...for individual companies, if you are not a traditional ship owner, with some conservatism and a good past like say that the company had survived the crises of the 80's and 90's , then I think it really tough to get finance!

4. Shipping Statistics

Q5: If we look at shipping statistics, then, how far can we say that they have been useful; should have been helpful or could have been helpful?

Answer: If you look at Martin Stopford or big brokering houses in general, they all have a research department. But nobody really forecasted what was supposed to happen. You can argue that as a broker, you are really needed between the fronts, you have to help your owners, you have to be helpful to your charterers or the shipyards; so I would say there was a lack of research in forecasting the future and investors kept ordering vessels as they forecasted that China would continue to grow was definitely was not very smart

5. Government Intervention

Q6. Then, we have government intervention which is taking place? What do you think about government Intervention in the shipping industry?

Answer: I think it is a different form of protectionism/economic nationalism, which from a country point of view fully understandable as you try to keep your domestic industry working and your citizens in job but from macroeconomics view I think it is very dangerous as it does not cure the problem but instead states by supporting shipyards, they are instead delaying the curing of market as much as government do not see the whole picture but only their country.

Q6 (Contd): So you mean to say that government actions taken at local level for other industries should not be the same for shipping because of its global nature of the business?

Answer: Ya, Shipping by nature, is probably most international business you can be in.. Whatever happens to China affects everyone in shipping all over the world,. therefore, one should have a very globalised view of the industry, especially as a government....especially, I think as the crisis has shown there are signs of more and more regional interconnections between countries, for example German Ship owners

have been granted loans from banks in China, there is kind of interconnections between countries, which I think is very important and interesting.

6. Risk Management

Q7. What about risk management strategies? Do you think they were in place; that they should be or they should have been in place to protect the industry against the current crisis?

Answer: I think, for example if the FFA's market-if you use it as a hedging strategy to cover your position in your market it is very useful but if you use it as has been done a lot, not only in shipping in future context, if you use it as a speculating tool, it is very dangerous. But in order to have a liberal financial market, those things have to be allowed...Yeah, I think freight derivatives have to be allowed as every speculator also somehow take a way risk from someone else who do not want to take risk. I think freight derivatives are very important.

Q7 (Contd). You mean, this is the only way of managing risk in shipping?

Answer: No, shipping is inherently risky because of its cyclicality and the huge financial investment you have to undertake. So, I think due to the cyclicality, you have to face the fact that you have to have reserves in order to survive such crisis.

If you look at the Greeks, they know how; how to tap the market; to survive they know when to buy when to sell; if you look at some German owners, they have not relied on their gut feeling... They saw China and the bid demand represented by some big liner companies and they just order ships on the very peak of the market and now they are in trouble. I think you have to be very conservative in shipping and I think that is your most natural risk management tool and also by keeping reserves, try to cover your risk by joint ventures or even by diversifying in different tonnage in my opinion.

Q8: Suppose we come back to the Greek example you just gave – You said it is the timing of the investment which always help them come out safer of the game. So, how do you think they always, manage to calculate the right timing?

Answer: I have lots of Greeks in my class. About 50% are Greeks and they are all or at least most of them are quite talented in numbers; in maths- that will be a very bad generalisation but I think in they are in terms of economics and looking at the figures and sensing what the figures tell in the long run,...that's the biggest advantage they have and they have been in shipping for a very long time and that's family are involved. If you look at public companies and if you look at the Greek company where you have the old Captain and he has the son, he brings in the son and gives him all the knowledge. They are very conservative. They have been in shipping very long time with values passing from generation to generation, it is a long term business; they have a very different view; they do not necessarily look at profits only, as public companies do. The prime motive of being in shipping is tradition. Of course, they time their investment and get lot of money but they stay in shipping based on their experience and conservative outlook is what allow them to drive the market in a correct way.

7. Financial crisis leads to shipping crisis?

Q9. When you say that the global crisis is very bad to the shipping industry, how do you explain why it is so bad?

Answer: It is a bit tough question but it is a mix of both which makes it so lethal for shipping. But I think if the shipping industry had to deal only with the supply issue and so you are more likely to solve it in some way. If to the supply issue, you add really large scale financial problem, then the whole basis of trade is somehow crippled – e.g. you do not get letter of credit if you try to ship your cargo from port A to port B, and it stays in the port, which is very imminent in the second part of 2008 or if you cannot finance your new buildings (which is a bad example but just to show how it affects on the supply side),so if people like us earn less, consume less, in the long run, it starts with the container then, it takes all the market. You consume less energy eventually which in the end which then also affect the tanker market in a way ... yeah, in a way it is all interlinked and the financial crisis is really going to the very roots of demand for tonnage.

8. Crisis – Bane or boon?

Q10. You said that global crisis is very much problem to the shipping industry. Can please you explain how is it so?

Answer: Basically it is on the demand side. If you look at demand for tonnage there was 20% drop in volume transported and the 20% drop is something which never did happen. It clearly shows the impact of the financial crisis and the lag effect. The longer the time passes, the more people will be redundant, they lesser they consume which has a lag effect on shipping. So, that's the demand side and of course on the financial side, you cannot afford to finance your new orders, that may have strain on your cash and use your in house reserves and lot of companies will go out of business...we have not seen lots of bankruptcies but there is lot to come, especially in the liner market I think.

Q11. Some people believe that the global crisis may be a boon for the shipping industry. Do you agree?

Answer: Of course it is not good because companies will go bankrupt and you never know who is going to be affected. But in the long run, the level at which shipping markets were trading over time were unsustainable, so in a way it is the cleansing kind of crisis bring everyone back to be more conservative and more aware of the industry.

9. Any other views or comments, suggestions:

Q12. Earlier you mentioned limitations in statistics and need for improvement. Suppose you attempt use in statistics in providing better predictions, do you think some kind of modelling which would be helpful?

Answer: I have no real answer to this. The future is always prone to errors. The more people do it,..they do so using weighted average, by doing so, every broking house their in house forecasting I think they come up with something really incredible which they might not be likely to share with you, so there is the need for more transparency and more collaboration.

Q13. But in the shipping industry is known to be very conservative (secretive). So, how can we have more transparency when everyone tries to pull out on their own resources or they have information?

Answer: As long as shipping is dominated by private interests, by private companies it will be tough to achieve a high level of transparency as it happens in other industries. Other industries are dominated by public co. which by law has to disclose financial information to stakeholders. Shipping is mostly owned by private, so that to wish for more transparency, it is very important but it is not very likely to happen.

Q. 14 Another thing is that because of private concentration, you have lots of speculators who come into the business which distort the market in a way. Do you there is need for some regulatory framework to limit the market?

Answer: The thing is that shipping is so international and one of the fundamental issues that make trade and everything so lucrative is the fact that they are liberal in nature. If you bring in too much regulation in the shipping market to avoid speculation, then you restrict the liberal character which will be detrimental, I think. Speculators are not always bad though there is risk and especially as speculators take risk that someone else does not want to- so I think we should stick to that as speculators bring more energy and competition in the market which I think is good.

Q. 15 How do you view the crisis and the shipping industry at the moment?

Answer: At the moment... uumh, I think the crisis is quiet at the moment, which I find surprising, especially in the liner market. Look at those big liner companies – they themselves have big exposure in the shipping industry and they still chartered tonnage at very high rates and issue high invoices ...there is not much renegotiation which I think is not sustainable on the long run, unless, of course they have undisclosed reserves. Other than that tanker for instance has only been recently affected. So I think this is going to take a while as they try to stabilise things but if you look at how they do it, ..like printing money in America, the same in UL, it is

like laying up the foundation for the next crisis which may be inflationary so that the whole system look better than it should be-shipping is in the same position as the financial crisis – so it is not over yet, I think!

Appendix 4 Briefings from Interviews

(i) Brief 1

Date: 15 June 2009

Particulars: Alan

Written Questionnaire answers – 10 minutes

Questionnaire based interview – 20 minutes approx.

1. Financial crisis or shipping crisis-which is worse?

If we restrict our concern to the shipping industry related issues, it is certainly the shipping crisis, though under the present recessionary conditions, it is hard to draw a line between the two.

2. Shipping statistics-usefulness and reliability questioned?

Looking at statistics in context of the survey was beyond the remit of the IMO. However, based on the personal opinion of the respondent in view of his previous work experiences on the commercial aspects of the industry, shipping statistics are believed to be meaningful input to the industry in guiding policy decisions.

For instance, presently with the IMO being heavily involved in the procedures towards enforcing the ship recycling convention, statistics from the Lloyd's register of shipping were very useful in giving shapes to some of the regulations.

3. Shipping market segments

The differing reactions of the specific market segments are simply the result of the key differences between the market that those vessels cater for and the operating market conditions which differentiates one segment from another. For instance, in case of the dry bulk market, time charters are usually negotiable and of shorter duration as compared to tanker trade where suppliers are specialised agencies and contract are long term.

4. Ship finance

With the present financial crisis, with limited ship finance options being available, money available for investment in ships is reduced. Moreover, liquidity constraints also affect demand for cargo which is transmitted to the industry through reduced demand for transport services. As such what is ‘‘bad news’’ for the new building industry results into ‘‘good news’’ for the demolition market, if one may say so.

5. Government Intervention

Presently, the timing of the crisis is critical for the ship recycling convention. It serves to emphasise the need and urgency to regulate the demolition market. So, from a regulatory perspective, at present it is crucial for government to seriously consider its commitment towards the ship recycling convention than it would have been under normal circumstances.

6. Financial crisis and shipping crisis –Is it depicting the chicken-egg situation?

From the representative of the IMO, the distinction between the financial crisis and the shipping crisis is simple. Financial crisis means demand exceed supply, i.e. there is not enough capital while shipping crisis is more to do with supply exceeding demand.

Presently, it is a combination of two which is something different compared to previous crises. As such the effect as well is fatal. We have on one side the financial crisis, which is reducing demand for cargo and money (capital) available for investment in ships whereas the shipping crisis is forcing the industry to get rid of excess capacity.

7. Boon or bane?

From the regulatory perspective, bearing in mind safety and environmental protection issues which is the mandate of IMO obviously, the current situation may be perceived as being a boon on balance. Firstly, with the shortage of seafarers and the increasing pressure that was being felt by the industry due to the upswing in

demand for transport services, a crisis at another level was being anticipated. With the sudden change in market conditions, we have the time to wisely invest in manning prospects. On the environmental front, reduced demand for transport services implies reduced consumption of fuel and subsequently reduced pollution as a result of air emissions from ships!

8. Globalisation & IT

With globalisation & IT revolution, the players involved today are certainly more wide ranging than before. As a result, as the gains are tremendous, it is normal that the negative impacts be also far reaching. We cannot be all winners at all times!

Brief 2

Date: 21 June 2009

Particulars: Alex

Written Questionnaire answers – 10 minutes

Questionnaire based interview – 20 minutes approx.

1. Financial crisis or shipping crisis-which is worse?

For the shipping industry, obviously the shipping crisis is worse. Prior to the crisis, the huge order books was already raising concerns as one and all kept maintaining that the boom was unsustainable! Yet investment in new buildings continued growing. It is not rocket science to see that in its most basic form, it was simply gambling, which very often takes place in ship investment. The consequence of the uncontrolled gambling as being observed at industry level is the cancellation of orders, vessels being laid up in view of feeble prevailing freight rates and overwhelming scrap markets.

2. Shipping statistics-usefulness and reliability questioned?

People pay a lot to obtain statistics. Whether people should use them or not, people do use them. For instance, if we look at the buoyancy of the Chinese and Indian economy for the past five years, forecasts had been predicting that the growth would not continue and they kept growing and building up optimism of investors and vice versa. At times therefore, the limit to which reliance may be or should be placed on statistics get blurred, which where experience of the players then make the difference between those who survive crises and those who perish.

3. Shipping market segments

The tanker crisis is more critical (in the sense that it is concerned with carriage of energy and the world needs energy to function!).

The dry bulk market is concerned with raw materials and the liner trade with end products. So, in way, all the three segments though different in terms of the cargo traded remains closely connected. What explain the differing responses in the

specific segment actually might be the priority needs of people. Construction projects are not a priority in times of troubles. So, the dry bulk sector was the first one to be trimmed. Next came the liner trade and eventually as the need for transport services were reduced so was the need for energy, which explains the lag in reaction of the tanker industry. Therefore, impact first felt in the dry bulk and container market was (reflected) passed on to the tanker trade in due course!

4. Ship finance

Ship finance is not an area which the respondent deals with and therefore, would prefer to abstain from commenting on same.

5. Government Intervention

In case of government support to shipyards, beside looking at the industry's short term gain in terms of finance as actions are being taken to cut down the excess capacity and we look at the government's policies from a long term perspective, it is reasonable in the sense that if the domestic industries are not supported, this will lead to an invaluable loss of skills to the industry, which will be very difficult to get back once it is lost.

6. Financial crisis and shipping crisis –Is it depicting the chicken-egg situation?

Every crisis is different. Shipping cycles is always there. There are booms, there are also busts. The shipping industry always reacts to those. However, different crises pop up at different times for different reasons.

Referring to the current crisis, clearly, one led to the other. Shipping services reflects general world finance market and international trade obviously. Shipping is affected by the demand for goods and services while effective demand actually requires the not only the willingness but also the ability to pay. So, with the financial crisis affecting players' ability to pay, it is found that they are all interconnected and the resulting impact on shipping markets and market segments likewise were anticipated.

7. Boon or bane?

From the perspective of an institution committed to ensuring quality manning of vessels, it is believed that had the credit crunch not manifested itself, the shipping industry would still have to face a crisis situation sooner or later. Maybe the boon would have perpetuated for longer period, had the financial crisis not precipitated the downturn in shipping as well. However, this may not have been for the good of the industry in every respect.

To support world trade, we need ships and to use ships we need seafarers. Prior to the credit crunch and subsequent shipping crisis, the industry was already facing an acute shortage of qualified manpower. The crisis at manning level was gaining momentum as the boom positive growth continued. Had trade not dropped off, the shortage of seafarers, employment of increasingly not yet fully qualified or experienced seafarers may have resulted into more casualties at sea, loss of lives and potential damage to environment... So, the credit crunch has in a way given more time to the industry to take care of the looming crisis at manning level. However, this will be possible, only if the time is used wisely! If not, the industry should brace itself for the next crisis which may not again be financial-led but still have dramatic impact on the industry as the financial crisis.

8. Globalisation & IT

On hindsight, with widespread globalisation and IT revolution, it was expected most people should have been able to see the so many unsecure loans on the world subprime market, very easy loans in the shipping industry for new loans well in advance!

(ii) Brief 3

Date : 23 June 2009

Particulars: Alf

Written Questionnaire answers – 10 minutes

Questionnaire-based interview – 20 minutes approx.

1. Financial crisis or shipping crisis-which is worse?

Financial crisis is certainly the worse as unlike shipping crisis since it affects both the demand and supply factors for shipping services.

2. Shipping statistics-usefulness and reliability questioned?

Published statistics are base data. According to the normal practice in the banking sector, for instance, this base-data are subjected to “hair-cut” in banking terminology. In other words, they are analysed in house and supplemented by analysis usually sought from external valuers (e.g. Marsoft Statistics). They usually provide information under differing scenarios from the high-ends to low-ends.

3. Shipping market segments

50% of financing by the financial institution funds to shipping is allocated to tankers, around 10% to container trade and logistics and the remaining usually directed to support investment in the dry bulk sector.

4. Ship finance

RBS has been financing shipping for almost 250 years. Shipping is not only about investment in ships, it is also about ship broking, ship registration and insurance.

The bank traditionally focuses on strong players and usually maintains a conservative approach to shipping finance. As an investment bank, therefore priorities are given to quality projects. A major proportion of the funds available are directed towards new buildings or five years old vessels. The bank is normally reluctant to finance older vessels and is certainly not specialised to

service the needs scrap traders in order to steer clear of the inherent risk implications.

5. Government Intervention

In case of RBS, it was severely impacted by the crisis. Had it not been for government intervention and assistance, RBS would have had to face exceedingly dire circumstances. In this sense, government support was greatly welcomed. Moreover, based on personal respondent's reasoning, UK is a service industry and government support excluded shipping. On the other hand, countries like China are very much reliant on their manufacturing base so that government support to the shipyards is reasonable as is the case of the UK government towards its service sector.

6. Financial crisis and shipping crisis –Is it depicting the chicken-egg situation?

What banks are being blamed for was on account of so called supply driven investment in shipping. In other words, banks were expected to rationalise the quality of cyclical market, anticipate the worse case scenario and put a stop its lending activities to shipping projects on this basis. What is often forgotten it seems is that banks are not regulators of the economy or any particular industry! As a commercial investment banks, banks respond to cycles as any other commercial entity. There might have been relatively easy loans to shipping activities until recently, however, it should be noted that it was demand led. Consequently, banks had no valid reason to curb investment for promising projects.

To answer the question, whether, it is the chicken and egg situation? In a way, yes and it is unfortunate that the financial crisis preceded the shipping crisis and banks being blamed for not having had a 'crystal ball'!

7. Boon or bane?

It may be a boon in a way as banks shift its focus back towards ‘‘core’’ clients and scale back lending to consolidate its liquidity position. Assets that were being chased not so long ago and adding to balance sheet growth are now being subjected to revaluation. FFA’s used in the dry cargo side was rather conservative. On the other hand, with regards to the offshore sectors, agreements were built contracts by private investors so that it was becoming more of a gambling tool than managing risk.

With regards to publications asserting that ‘‘loan defaults turning banks into ship owners’’ is certainly overstated as the question of exercising the ship arrests. Banks strive to assist its customers as much as possible and avoid the situation of foreclosure unless it is the last resort. Banks then turn to its ‘‘friendly’’ customers who are basically customers with strong liquidity position or services of ship management companies for assistance.

8. Globalisation & IT

Globalisation and IT is no more an option. It is embedded in the industry for it to survive and thrive.

(iii) Brief 4

Date : 25 June 2009

Particulars: Ali

Written Questionnaire answers – 10 minutes

Questionnaire based interview – 20 minutes approx.

1. Financial crisis or shipping crisis-which is worse?

For commodity trade to flourish, credit line is needed. If there is no cargo to be transported, no ships are needed. As such ownership of vessels is no longer asset, rather they become liabilities.

Without credit line, trading in the shipping business slows down resulting in excess capacity (tonnage). For instance, if the grain transportation be taken as an example, demand for panamax vessels has dried up. Suddenly, we have an excess capacity for such vessels. Instead smaller vessels are being sought to minimise cost and improve efficiency. Similarly, if we look at the dry bulk market, the cheaper option for the Chinese industry would be to trade with Australia as compared to continued transportation of iron ore from Brazil.

2. Shipping statistics-usefulness and reliability questioned?

With respect to statistics their reliability remains highly questionable, especially in the present circumstances.

In the opinion of the respondent, it is believed that too many people rely on the so-called ‘‘experts’’ and their predictions, though they seem to get things wrong more than right!

In shipping, there is no fixed formula for success or any hard and fast rule to be always a winner. This is because of the uncertainty which prevails in the industry and makes it all more challenging. Incidentally, therefore, shipping statistics are only reliable so far as they are used merely as benchmark and not the core/central element in investment decisions.

3. Shipping market segments

With respect to the reaction of specific market segments, the reactions may be summarised as follows:

Container market – It is a ‘dead’ market at present and it will certainly be the last one to pick up!

Dry bulk market – It was the first one to crash but it was also the first one to pick up as steel mills picked up again.

Tanker market – It reacts in response to oil price fluctuations. Bunker cost at present, however, though it may be low, it only matters if cargo is available and we have a fixture!

4. Ship finance

Currently, existing banks are dubious of shipping people. Instead they are more focussed on key clients, with whom they share good relationships based on past exchanges.

On the other hand, use of derivatives challenge the real fundamentals of the shipping business. Use of derivatives by companies like Cargill, which has the knowledge of the commodity market as well as the shipping market, they are in a better posture and use of derivatives seem reasonably acceptable. However, comparing the behaviour of ‘‘crazy-people’’ who are out simply for making money in the short term and overplay the derivatives as ‘‘quasi-raw gambling’’, they destroy the real fundamentals of the shipping business.

5. Government Intervention

Government intervention shows results in the long run. In the short run, from history we have a number of state programs which are implemented and which are not deemed as being good enough at macro level. They are said to be falsifying the market. However, looking beyond the need of the shipping industry, the case of Chinese government supporting its domestic industry is

certainly reasonable. If no such action is taken, this implies potentially large scale unemployment, lower GDP growth, lower investment and similar ‘domino effect’ which generate a negative circle with far more serious implications on the world economy as a whole in the longer run.

6. Financial crisis and shipping crisis –Is it depicting the chicken-egg situation?

The current crisis is most certainly different from former crises. Respondent believes that the current crisis is not part of the ‘normal’ shipping cycle. It has been forced on the industry by virtue of the banking crisis led by the subprime/mortgage business going bust!

However, it is also true to say that the shipping crisis itself was already being invited by the very high order book for new buildings and older ships which were still kept in service as one and all in the industry were driven by the greed for more and more gain.

With the advent of the financial crisis, there was a ‘‘knock-on’’ effect on key industries which drives the shipping business such as the steel industry which slowed down as well as the construction industry. For example, Dubai was heavily engaged in massive construction projects which suddenly stopped. Why were the projects stopped? Obviously, it was the consequence of the financial crash. Reduced demand for construction materials implied reduced need for transportation services and therefore for vessels of the related shipping market segment.

It is therefore, very difficult to unlink the financial and shipping crisis in the existing circumstances.

7. Boon or bane?

Value of ships was inflated as willingness to pay for them during the boom was tremendous.

The plight of capsize vessels were more dramatic. Investments in new buildings were negotiated against five year charter rates. With the downturn, following the astronomical fall in freight rates, the real worth of the vessel was totally distorted. Similar example may be related to containerships. Under the German KG scheme, astronomical investments were made in container ships and long time-charters were agreed. However, within one year, with the adverse conditions for credit lines, stakeholders could no longer sustain such colossal rates as the demand of manufactured goods, especially from China fell drastically. Vessels were thus, laid up. The key question is why are assets laid-up? The answer is simply because they are not assets anymore. This answers the first question. From ship-owners perspective the crisis is undoubtedly a bane!

8. Globalisation & IT

Information flow being faster in today's world resulted in more lags in reactions in economies across the world. With the worldwide interlinks and connections as a result of globalisation to facilitate trade, the crisis was global in dimension much sooner than before.

9. Last word...

Traditional ship owners look at shipping from long-term perspective. For example, Greek ship owners plan their business for 60 years ahead. However, as at date, there are too many outsiders getting involved in the industry without a feel for the business, driven simply by the eagerness in 'number-crunching'!

The so-called financial 'Gurus' have turned 'ship' into a tool to make money so that the real fundamentals of the shipping business was badly undermined with too much attention focussed on making more and more money-rather than provision of a service at a competitive rate; with the end result being obvious by the disaster we are experiencing today.

Therefore, the lessons learnt from the current crisis should be to encourage people in the industry not to move away from the real fundamentals and to stay

away from ‘‘fancy financial tools’’ which they are not familiar with and which has the tendency to change the mindset driving the shipping business away from business and to more of gambling. Shipping is only a function of transport but lure by greed, more and more people comes into the business just to make easy money. The popular adage of ‘‘buy low-sell high’’ attracted speculators with tremendous risk appetite who ended up creating a mass of greed which was fuelled by the Chinese economy boom – who were willing to pay the abnormally high prices - which again only serves to show how true it is that ‘‘money follows money’’!